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To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and improve the character of the service rendered to the public.

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SUEZ CANAL STATISTICS.

An examination of the statistics relating to the traffic through the Suez canal last year affords a favorable occasion to one of the German shipping papers for showing up the extent to which our Teuton cousins are eating into the maritime trade of the world, principally at our expense. It is pointed out that there was a further increase in the canal traffic last year, and the principal part of it was of course carried on under the British flag. Germany, however, follows on in the second place, as she has done for years past, but at a long distance apart; France, Holland, Japan, Russia, Spain, Italy, etc., bringing up the list in the order named. The number of vessels passing through the canal under the British flag was greater last year than in the two previous years, nevertheless the rate of progress of the British flag is declining, while that of the German flag is slowly but persistently increasing, as is shown by the following comparison of the traffic under the two flags since the year 1890:

British Ships.		German Ships.	
1890	2,522 = 74.4 per cent.	275	= 8.1 per cent.
1892	2,581 = 72.5 "	292	= 8.2 "
1895	2,318 = 67.5 "	315	= 9.1 "
1898	2,295 = 65.5 "	386	= 10.2 "

In the number of vessels under the British flag which used the Suez canal, therefore, there was a falling off to the extent of 227 = 8.9 per cent. of the whole traffic, when compared with the year 1890, while in the number of vessels under the German flag there was an increase of 111 = 2.1 per cent. of the whole traffic. But when the comparison is struck on the basis of net register tonnage, the progress of the German flag takes still greater proportions, viz.:

Tons—British Ships		Tons—German Ships	
1895	6,059,402 = 71.7 per cent.	696,302	= 8.2 per cent.
1898	6,297,743 = 67.0 "	969,597	= 10.5 "

There was thus an actual increase in the case of both flags—but whereas the British gain was 238,341 tons, that of Germany was 273,295 tons. Further the figures show that relatively to the whole traffic there was a falling off in the case of Great Britain to the extent of 4.7 per cent., while for Germany there was a gain of 2.3 per cent. The figures do not seem to require any further explanation, but it is worthy of remark that the largest vessels which use the canal fly the German flag, and that the German postal services to the far east are to be doubled in the course of the present year.—Fairplay, London.

TO SEARCH FOR THE ARCTIC EXPLORER.

An expedition to search for Andree and his party is being fitted out to start for the northeast coast of Greenland within a few weeks. The party will be in charge of Prof. A. G. Nathorst and will sail from Norway on the steamer Antarctic. The expedition will aim to strike the Greenland coast between latitude 73 and 76 deg. north and remain on the coast for a few weeks, while the party will explore for traces of the lost aeronauts. Prof. Nathorst concludes that the numerous searchings around Spitzbergen, Franz Joseph Land and northern Siberia have demonstrated that Andree would have been found before this had he landed in that territory alive. Greenland is therefore the only country in which there can be any hope that Andree has survived, and he says that if Andree landed in Greenland and took the east coast route he could readily provide food and clothing, but some years would be required to make the trip southward. The expedition party will consist of six scientific men besides the professor and a crew of thirteen. Prof. Nathorst is an old arctic explorer, having been with Nordenskiöld twenty-five years ago in Spitzbergen and Greenland. It is expected to get through the ice floes to the northeast coast of Greenland about the end of July.

FIGURES ON COAL AT THE HEAD OF LAKE SUPERIOR.

The receipts and stock of coal on hand at the head of Lake Superior for the past several years, were, according to official figures, as follows:

On hand May 1st.	Anthracite.	Bituminous.
	Tons.	Tons.
1894.....	142,392	344,660
1895.....	159,304	321,988
1896.....	122,364	90,181
1897.....	102,512	123,508
1898.....	99,969	114,844
Receipts for season of navigation.		
1894.....	562,243	1,448,509
1895.....	469,965	1,183,047
1896.....	496,189	1,279,523
1897.....	501,507	1,490,542
1898.....	495,877	2,041,399
Shipments during season of navigation.		
1894.....	545,321	1,471,181
1895.....	367,361	1,092,856
1896.....	393,677	1,156,015
1897.....	241,025	971,241
1898.....	381,409	1,354,870

THE case of the Blairmore, recently decided by the British House of Lords, and reversing the verdict of the Court of Exchequer and the Court of Appeal, is extraordinary. The Blairmore capsized and sank at San Francisco. The assured promptly claimed a total loss, but the underwriters recovered the property and delivered it to the owners, denying their liability except for particular average. According to the ultimate decision arrived at, the underwriters were held to be liable for a total loss, and therefore no longer assurers but in this case made shipowners—a position quite alien to the principles of marine insurance as understood by operators for generations.

ON the last day of this month the Navy Department will be prepared to open bids for furnishing 24,000 tons of armor plate for the new monitors, cruisers and battleships. For part of this armor the department is authorized to pay \$400 per ton, but for the larger portion only \$300 per ton can be paid, according to law. It is generally supposed that the Bethlehem and Carnegie companies, the two concerns which heretofore furnished all of the Government armor, will not bid.

HISTORY OF RACINE HARBOR.

Racine harbor, which is about to be improved so as to make it navigable for the largest vessels on the lakes, has an interesting history.

The story is related as follows: It was away back in 1842, when the stream known as Root River was first selected for a harbor, and the people of Racine commenced the work. Captain Cram had located the harbor from indifferent or misleading plans and surveys and had so situated the piers that a large limestone rock lay in the middle of the stream, or entrance. It was about sixteen feet from top to bottom. Contracts were often let to remove the obstacle, but as often were given up. Abel Hawley, of Milwaukee, took the contract at last, and while he worked at the job one Ira Dean continually rang a dinner bell around the village, crying: "There's a rock in the harbor; come to the rescue." The people did come to the rescue, and by the hundreds, and continued to come until the rock was out.

The people raised subscriptions, voted taxes amounting to \$10,000, and issued bonds for \$25,000 before the government granted any aid. It soon became known as the best port on the west shore of Lake Michigan. A uniform depth of fourteen feet of water prevailed, and elevators were built along the docks and a big grain business was done until the elevators burned.

For the last six or eight years the harbor has been in a deplorable condition. It has been impossible for vessels drawing over thirteen or fourteen feet to enter. On the north side of the river the depth of water shoaled to about six feet, this condition being on account of sand drifting in from the beach. On account of this the Goodrich Transportation Company withdrew the steamer Virginia, which touched there daily, and put on smaller boats. Of late even these boats have not been able to enter during a gale. Many owners of lower lake vessels refused to charter for Racine and it was fast gaining a reputation as an unsafe port.

FINNS ASK ABOUT NEWFOUNDLAND.

It now seems likely that Newfoundland will soon receive a colony of Finlanders. Applications have been received by the government authorities bearing on the subject, asking what steps are necessary to take, and how far the Newfoundland legislature would assist. Information is also sought as to sections of the island in which the Finlanders would be allowed to settle, and as to how they could engage in the fisheries and the farming industries, with all of which they are familiar. The Colonial Ministry is giving the matter careful consideration, and will probably encourage the Finlanders, as it is believed they would make a very desirable class of settlers.

It might be advisable in this connection for the Alaska authorities also to take cognizance of the wishes of the Finns, as it is well known that they would make excellent settlers in that portion of the United States territory and tend to earlier develop the immense fishery productiveness of the Alaskan waters.

JAPAN has promptly responded to Germany's annual subsidy of 5,000,000 marks (\$1,190,000) paid to the North German Lloyd Steamship Company for its Eastern Asia line, by subsidizing the Nippon Steamship Company to the tune of 2,573,800 yen (\$1,286,900) a year for its line to Europe. This European line will have twelve vessels in service, the largest of which, the first to make the run, the Makasa Maru, has arrived at this port. The steamship is of 6,266 tons register, and was built in Japan. According to the terms of the Japanese subsidy, the Nippon Company is required to run vessels of not less than 6,000 tons, capable of a speed of fourteen knots, semi-monthly.

NEWS AROUND THE LAKES.

CLEVELAND.

Special Correspondence to The Marine Record.

Mr. C. B. Calder, of Detroit, visited this port on Wednesday.

Owners who chartered for the season find that their bygone business tactics are at a discount and say that there will be less "fixing ahead" in the future.

The Craig Ship Building Co., at Toledo, is quite busy at the present, having three steamers destined for the coast trade on hand, besides a large amount of rebuilding and repair work.

Some of the Cleveland tug men have pointed out the fact that in talking of the tug trust all of the tug men on the lakes have said that if there was anything in this movement they do not know of it. Each of them in interviews at different times have made use of this expression: "All I know of it is what I have seen in the newspapers."

Figures furnished the Iron Trade Review directly from Lake Erie docks show that the amount of ore at lower lake ports May 1 was the smallest in seven years, save 1896, when stocks were about 125,000 tons less than at the beginning of the present month. The aggregate is 2,073,250 tons, as against 3,167,915 tons on May 1, 1898, 3,356,497 tons May 1, 1897, and 1,949,698 tons in 1896.

The Bourne-Fuller Co. has recently sent to its patrons celluloid pocket match boxes, top and bottom of nickel, bearing the company's name and lines of trade—iron, steel and pig iron. In the introduction to its May stock list the company makes a suggestion in line with the developments of the past few weeks—that customers will save money and inconvenience by specifying early for any iron and steel they will require for the next few months.

Capt. Benham, of the steamer Wallula, was fined \$10 at Duluth for clearing from a Canadian port where a consular agent resides, without a bill of health. He was let off very light, however, as the maximum penalty is \$5,000. While this smallpox scare is on, vessel masters should not neglect getting a clean bill of health when clearing from a Canadian port. The Marine Hospital Service attends to the crew list at United States ports.

It is somewhat late in the day to start grumbling about the breakwater here, after the plans have been before the marine fraternity for so many years; yet, there are now some kickers who would like to see the breakwater moved out a mile or so further lakewards. Considering all the made land on the lake front, the tremendous increase in the size of the boats and the expansive ideas of our citizens, it is possible that the breakwater would be much better if situated a half mile further off shore, but who's going to stand for it? Suppose the city pays half the cost of removal, etc?

What appears to justify the publishers' claim that it is the most complete crane catalogue ever issued, has just been put out by the Brown Hoisting & Conveying Co., describing the "Brownhoist" cranes, and, besides showing standard types of cranes generally made by crane builders, illustrating many machines never before shown in any catalogue. Shipbuilders and those engaged in marine work will be interested in the illustration of the 15-ton pillar crane, 30-foot radius, with rotating gear, now employed in the New York Navy Yard. There are also others in this country, as well as in European shipyards.

Instead of being in pieces on Cana Island, as it was reported she would be by this time, the steamer Davidson, which stranded at that point last week, is now in dry dock at Manitowoc. She was released on Saturday by Capt. Mart Swain with the wrecking tug Favorite and is not greatly injured. She proceeded to Manitowoc under her own steam. General commendation is heard for the work which Capt. Swain did in releasing the Davidson. By his own statement, the vessel, when he commenced to work, was 4½ feet out forward and 2½ feet out aft. Hydraulic jacks were placed under the hull. Several unsuccessful attempts were made before the vessel was finally floated off. Capt. Swain telegraphed Parker & Millen that the job was the most difficult he had ever undertaken. The Davidson carried no insurance, and the underwriters, consequently, had no hand in the wrecking. The responsibility of the job was undertaken entirely by the vessel's Milwaukee owners, subject to their belief in Capt. Mart Swain and the powerful wrecking outfit of Messrs. Parker & Millen.

In the United States District Court at Boston, Mass., Judge Lowell, the unique case of W. H. Lowell and others, of Gloucester, owners, master and crew of the schooner W. H. Cross, vs. 99 gold coins and other valuables, derelict on the high seas, was decided, the property being divided among the libellants. The valuables were picked up by the master and crew of the schooner some distance from the scene of the Burgoyne disaster. They were attached to the body of a man and were estimated to be worth \$1,050. The body could not be identified and had to be buried at sea. No one appeared to claim the property, and the court was asked to award the amount to the salvors. The court divides the property in half, holding one-half as salvage, of which one-third is to go to the vessel's owners, one-third to the master, and one-third to the crew. The other half will be held by the government.

BUFFALO.

Special Correspondence to The Marine Record.

The Fairbanks will in future be known as the Eliza H. Strong, when the Mill's dry dock have got through with her. She was formerly owned in Cleveland, burned and made a constructive total loss, since which she has been rebuilt.

Work at the Union Dry Dock Co., on the new Western Line steamer is about suspended on account of a lack of material, and it can not be stated when the vessel will be launched unless steel is delivered at the yard more punctual than it has been in the past.

A dispatch from Ottawa says that information was received there on Monday that the promoters of the Ottawa and Georgian Bay ship canal have deposited \$200,000 in the Canadian Bank of Commerce at Ottawa, in accordance with the provisions of the statute incorporating the company, Parliament requiring such a deposit to be made before the company can organize. Mr. McLeod Stewart, with one of the members of the provisional board of Directors, is expected in the city from England on Saturday.

There can be no doubt but that there ought to be a good and adequate fog signal on Peninsular Point, at the entrance to Erie harbor. Capt. Duddleson, of the L. C. Waldo, was off that port in a heavy snowstorm, in company with a lot of other steamers last fall, but they could not hear the little bell, which is all the warning vessels have at that place. The Waldo was consigned to Erie and was also chartered to load there, but she eventually proceeded after finding it impossible to safely enter Erie harbor and she discharged her cargo here.

Fire in the hold of the steamer Cuba on Wednesday night, caused a loss estimated at about \$35,000. A bracket supporting a lamp became detached in some way, precipitating the lamp into the hold. The fire department flooded the steamer and she is now sunk in the river. The damage was mainly to the cargo. The steamer is not much burned. The Cuba was loading at the Lackawanna docks when the accident occurred. One third of the cargo was on board. She is owned by Donaldson and others, and was in charge of Capt. Robert Young.

Mr. Ogilvie shipped some of the first wheat from Duluth in the early 70's bought at Red Wing, Winona and La Crosse. This grain was shipped up the river to Stillwater, and from there to Duluth by rail over what is now the St. Paul & Duluth. The freight by rail was 5c per bushel. The grain was then shipped east to the mill over the Beatty line that had been subsidized then by the Canadian government. Previous to that arrangement for getting Minnesota wheat Mr. Ogilvie had bought wheat and shipped through Milwaukee. Mr. Ogilvie stated that he had paid as high as 30c a bushel to get wheat to Montreal. Last season the average to him for transporting wheat from Duluth to Montreal was 5c a bushel.

It is announced that the new steamer Pennsylvania will begin running between this city and Erie on May 28. This is the steel boat which was built at Detroit for the Buffalo & Erie Transportation Co., and is one of the finest on the lakes. The vessel will have accommodations for 1,800 passengers and a large freight capacity. The boat has shown her ability to make 20 miles an hour continuously on normal draft and coal consumption. The Pennsylvania so her owners have planned, will leave Erie at 7:30 o'clock every morning, arriving here at noon. She will take excursion parties to various lake resorts in the afternoon and will return in time to depart for Erie at 7 o'clock in the evening. The steamer will use the dock at the foot of Commercial street.

It is now a necessity for mates to know how to read and write. This is an unjust law. We know of a number of mates who are first class men on the fore-castle of a steamer, but are debarred from earning a livelihood because they cannot read and write. There are now two Nashville mates going to school to receive the first rudiments of an education. When they have learned their A B C's from some gentle schoolmistress who is gifted in teaching "the young idea how to shoot," and have mastered the first rules of politeness, they will be well on their way to comply with the requirements of the law framed by Supervising Inspector General Dumont, and when they have learned to read and write and "school is out," they will be found undergoing an examination before the proper authorities to obtain their mates' licenses. They will probably not be any more proficient in their profession than they were before they went to school, and it is not likely they will have unlearned any of the soft and soothing terms they were wont to apply to the negro roustabouts when giving their orders. On the contrary we may expect to hear the same old outbursts of profanity that go through the air like streaks of forked lightning.—Waterways Journal, St. Louis, Mo.

We are pleased to note a growing desire on the part of foreign courts of justice to deal with maritime cases on a broad international basis, and to allow decisions of English judges to form precedents for their own findings. The remarks of an American judge, in the recent Irrawaddy case, are very pertinent to this idea. He said that as the interests of shipowners, merchants, and underwriters are international in their character, the same construction should be placed as far as possible by all maritime courts on maritime cases.—Syren and Shipping, London.

CHICAGO.

Special Correspondence to The Marine Record.

J. J. Rardon & Co. chartered the steamer Gladstone for oats to Buffalo at 1½ cents.

Between May 1st and 23d only 28 vessels arrived at this port from Buffalo, outside of the regular line boats.

John M. Allmendinger, of Benton Harbor, has been awarded the contract for rebuilding 800 feet of the south pier at St. Joseph.

On Tuesday there was a good demand for grain carrying vessels to load for Buffalo at 2 cents, in fact more cargoes than vessels were obtainable.

At Barry's Independent tug line floating dry-dock the tug E. E. Rice was on for bottom calking, the tug Rosaline is on for repairs and calking.

At Miller Bros.' shipyard the steamer Francis Hinton was in dock for repairs to stern bearing; the fire tug Geyser is in receiving a general overhauling.

News of the settlement of the strike at Buffalo received here on Tuesday was hailed with much satisfaction by marine men and those interested in marine affairs.

The steamer Thomas Davidson which was released from Cana Island last Saturday arrived at Manitowoc, Sunday and was placed in Burger & Burger's dry dock Monday.

Capt. John Prindiville chartered the steamer Norwalk for corn to Port Huron at 1½ cents, the schooner W. A. Goodman from South Chicago to Kingston for corn at 3½ cents.

Capt. Orville Green arrived here a few days ago from Portland, Oregon, where he spent a very pleasant winter. The climate out there seems to agree with him, as he looks hale and hearty and younger than when he went away.

After the completion of the canal which the RECORD always designated as an open sewer, it will first be necessary for the governor of the state to appoint a commission of three to inspect the channel and see that it is constructed in accordance with law, before the water can be turned in.

The Lehigh Valley Co. have given a contract to Hausler & Lutz to widen their slip 12 feet and build 2,400 feet of new dock at South Chicago. The Illinois Steel Co. have also given a contract to Hausler & Lutz to build a \$150,000 dock. The dock will be of concrete, 1,100 feet long, 140 feet wide and a dredged depth of 21 feet.

At the yards of the Chicago Ship Building Co., the side-wheel steamer, City of Chicago, is in dock for bottom scraping and painting, the steamer F. Schlessinger was in for repairs to bottom and calking. Work on the Northern Michigan Co.'s new steel steamer Illinois is being rapidly forwarded. She will be completed by the middle of next month.

Dan C. Deegan, the well known vessel supply man, is conveying vessel supplies to his many customers on vessels in the river and harbor by means of a steamer which he has recently had built by Tom Bagley, the boat builder. Her dimensions are 30 feet over all, 8 feet beam, 3 feet molded depth. She is of very handsome model and has a Wootter's gasoline engine, built at Cleveland, which gives her a gait of 10 miles per hour.

Information has been received from Mr. W. I. Babcock, manager of the Chicago Ship Building Co., that their dry dock is being lengthened, and when completed the dimensions will be as follows: Length over all, 530 feet; length on blocks, 510 feet; width at top, 100 feet; width at bottom, 80 feet; width at gate, 70 feet; depth over sill, 16 feet. The depth of 18 feet over the sill is never attained except in times of extremely high water.

The Spring Lake Ice Co., of which Capt. Miles Barry is president, is erecting machinery near Chicago avenue and Harrison street bridges for unloading ice from their schooners A. Bronson, Kate Lyons, H. C. Winslow, Mary Collins and Four Brothers on their arrivals from Spring Lake, Mich., where the company have 100,000 tons of ice stored in a building 600 feet long, 200 feet wide and 50 feet in height. They are also purchasing ice wagons and will retail their ice in this city.

The Prairie is the name of a yacht being built for the Herrick-Thorne-Morgan syndicate, of Chicago, as a competitor in the trial races to select a challenger for the Canada cup. She was designed by W. P. Stephens, of Forest and Stream, and is expected to be in Chicago by the 1st of June. The yacht is 45 feet over all, 28 feet at the water-line and 9 feet beam. The shape below the water-line is a secret, though Mr. Thorne says the boat's lines resemble those of the new cup defender Columbia. She is 7 feet draught, and will carry approximately 1,500 square feet of canvas. The mainsail will have a 35-foot boom, 24-foot gaff and 22-foot hoist. The mast is 45 feet high.

Some marine men think the tug trust will be a good thing, as it will centralize the offices at each port, and do all business through one headquarters, expenses will be reduced and collection of tow bills expedited. It is conceded that the success of the tug trust in Chicago will depend largely upon the Barry Brothers line. If it does not go into the combine, it is predicted that the trust will have a formidable competitor at Chicago, and that the fleet of this company may head an opposition to go into other ports after business if the trust attempts to exterminate them. Captain Miles Barry says he will not discuss the subject pending the settlement of negotiations now in progress.

for the purchase of his fleet. It is said that owners of small fleets elsewhere have made overtures to Barry Brothers to form an anti-trust line and put up a battle for the survival of the fittest; but these propositions have not been entertained. Barry Brothers—seven of them—have devoted a life-time to building up a strong line, and they have a good "pull" on the lakes. The result is awaited with much anticipation by Chicago and Milwaukee marine men and shippers. If the Barry Brothers go into the trust the latter will consist of the Dunham Towing and Wrecking Co. and Barry Brothers' lines of Chicago, the Milwaukee Tugboat Line, the Hand & Johnson Tug Co. and Maytham Tug Co. of Buffalo, Nagle Tug Co. and Sullivan Tug Co. of Toledo, Inman & Singer Tug Cos. of Duluth, Smith Towing Co. of Cleveland, Vessel Owners' Towing Co. of Cleveland, Escanaba Towing and Wrecking Co. of Escanaba, and Thompson Tug Line of Port Huron.

The new offices, waiting rooms and warehouses at the foot of Wabash avenue which the Graham & Morton Transportation Co. are having built are being rapidly completed. The new building has frontages of 67 feet on the street and river and is 190 feet in length. The company will have the best steamboat offices and warehouse in the city. Their steel side-wheel steamer City of Chicago will commence running between Chicago, St. Joseph and Benton Harbor on Saturday, May 27th. She has had her engine entirely rebuilt and has been put in splendid condition for her season's work.

The New Kentucky Coal Co. have had their dock rebuilt and added a new electric light plant. Their two, four and five-ton derricks have been put in first-class order and they have had new quarters built for the accommodation of their men so that they will always be ready night and day to fuel steamers with their new Kentucky lump and Buckhorn egg coals. Mr. T. J. Hudson, the company's secretary and treasurer, will be pleased to have marine men give him a call at his office in the Fisher building. Mr. J. M. Cornen, the well known dock superintendent, will see that all's well at the dock, and Capt. George Tebo, the company's widely known and respected general sales agent will see that none of the steamers pass by his company's docks if it is possible to prevent them by fair competition.

Capt. James Davidson stopped off here Monday on his way home from Duluth, where he went with Messrs. Waite, of London, England; Wilcox, of Buffalo, and Thos. Johnson, of Chicago, last week, to pay a visit to the steamer Harlem, ashore on Isle Royale. They left Duluth on the tug Industry, Friday and arrived at Isle Royale, Saturday, the tug running 13 miles per hour all the way. The hull of the Harlem was found in fairly good condition heading to the eastward, her smoke stacks and spars up, except the mainmast, the fore sail on her just as left last fall and mizzen sail on boom in good condition, all ropes and gear in place. Capt. Davidson was surprised to find that nothing had been stolen. So the reports last fall of stealing by pirates in the vicinity were not verified.

ESCANABA.

Special Correspondence to The Marine Record.

Mr. A. A. Pomeroy has completed his work in the city for the History of the Lakes and left on Sunday morning for Marquette. During his stay here Mr. Pomeroy made many friends among the marine men and old settlers who seemed to have taken a good deal of interest in the proposed history.

The big steamer Davidson, of Milwaukee, has been released from Cana Island by the wrecker Favorite and taken to Manitowoc to be docked for repairs.

The crew of one of the whaleback barges refused to trim the cargo Saturday and the result was that they are now looking for jobs elsewhere.

"What won't they use for carrying ore on next?" is the question a good many captains ask when they get sight of the Lake Michigan car ferry barges taking on a load of ore.

All hopes of making this the best year in the history of Escanaba's ore business have taken a trip in a balloon, as business is as dull as an old hoe and does not show any signs of improvement at present. Not a single cargo of coal in port and very few ore boats arriving.

The light-house supply steamer Dahlia spent Sunday at this port.

The strike seems to have had a slight effect on booming the ore rate a trifle. It is now 55 cents per ton to Lake Erie ports.

The freight and passenger lines seem to have about all they can handle and are not making any pretensions of running on schedule time.

Capt. Ed. Hart, of the steamer C. W. Moore, of the Hart steamboat line, is in temporary command of the Fannie C. Hart. Capt. Roulette, of the Welcome, now laid up, being in command of the Moore.

Work on the new light at Long Tail Point, Green Bay harbor, is being pushed as rapidly as possible.

Joannes Bros. Co. and the Godfredson Hardware Co., of Green Bay, are going to build a large addition to their dockage, and have a 20-foot depth dredged along the entire length. The Northwestern Fuel Co. are also making extensive improvements at their docks in Green Bay.

A number of the coasting lines are having their steamers fitted with an electrical appliance for sounding their whistles.

DETROIT.

Special Correspondence to The Marine Record.

While lying at her dock at Sombra, Ont., the little ferry steamer Comfort caught fire on Sunday. All the deck and cabins were destroyed, and the damage amounts to \$300.

The John F. Eddy, a wooden steamer, is being rebuilt at the Clark dry dock. She was built at the yards in 1886, and has been a most serviceable and money making boat, although she is now getting among the smaller carriers and registers only 1,252 net tons.

Capt. J. W. Millen claims the credit of inventing the bow-screw ice-crusher as embodied in the Sainte Marie and the big Russian ice-breaker Ermak, which recently went into commission on the Baltic sea, and thinks the only mistake he made was in not having the idea patented.

The two big schooners building at Davidson's shipyard, West Bay City, will be ready to go into service by June 15. The planking of both boats has been finished. The large tug building for Port Huron parties is well up in the frames, but the machinery will cause some delay. It may be August before the tug is launched.

Darius J. Davidson has filed his report as commissioner in the case of the Detroit Dry Dock Co. vs. the barge Tycoon, her boats, etc., and the same company against the barge Mikado, her boats, etc. The libellants are awarded \$360.44 with interest in the case of the Tycoon, for repairs and materials furnished during 1897, and a balance of \$463.49 against the Mikado, from October, 1898.

Gilbert N. McMillan, for several years secretary of the Detroit Dry Dock Co., has resigned from a similar position with the Detroit Ship Building Co. and will go to Europe for a trip. The affairs of the Detroit branch, which includes the Springwells and Wyandotte shipbuilding plants, and the Detroit Sheet Metal and Brass Works, and Dry Dock Engine Works, will be under the general management of Alex. McVittie, with C. B. Calder as assistant, and Mr. Kirby, consulting engineer.

The schooner Ganges has been abandoned as a total loss. The owners reported that the Ganges had been struck by some passing vessel and knocked over on her side. The mizzenmast is carried away and the fore and main masts are sticking out of water. The wreck lies directly in the channel, near Point Pelee, and is a menace to passing vessels. It should be destroyed. The fact was made known to the collector of customs at Amherstburg, and it is expected that he will cause a light to be placed over the wreck at night.

The Vulcan Transportation Co., of Detroit, chartered its barge, H. H. Brown, Sept. 30, 1898, to the Atlantic Transportation Co. for a voyage from Cleveland to Newport News, Va. Before she left a policy of \$1,000 was taken out in the Etna Insurance Co. The barge was lost and now a suit has been begun for the insurance. The Parker Transportation Co. chartered its barge San Diego for the same voyage to the same company and insured her for \$1,250 in the same company. The San Diego was also lost and a suit has been begun for this insurance.

The naval reserves of Michigan has been made a grant of \$1,715.40. This allotment was made by the Navy Department in appropriation of funds of \$60,000 for the assistance of the naval militia of the various states supporting such organizations. The money will be distributed in the following manner: Michigan, \$1,715.49; Illinois, \$6,886.70; California, \$4,336.40; Connecticut, \$1,661.70; District of Columbia, \$1,715.01; Florida, \$2,354.81; Georgia, \$1,563.95; Louisiana, \$3,003.49; Maryland, \$1,777.22; Massachusetts, \$5,456.04; New Jersey, \$3,119.01; New York, \$8,281.81; North Carolina, \$2,328.15; Ohio, \$2,786.10; Rhode Island, \$1,741.47; South Carolina, \$2,310.38; Virginia, \$1,848.30.

The Ontario government has stationed forest rangers at the mouths of the principal streams flowing into Lake Huron, the Georgian Bay and Parry Sound, in order to see that no logs are exported to the United States except those cut previously to the prohibition coming into force. The rivers so watched are the Mississauga, Thessalon, Whitefish, French, Magnetawan and Sequin. The Crown Lands Department does not believe that any of the Michigan lumbermen will attempt to export in defiance of the law, but deems it best to be on the safe side by guarding against such a contingency. One of the largest Michigan firms, Eddy Bros., of Bay City, have cut 15,000,000 feet in Ontario limits during the past winter, and will probably have this all manufactured under contract in Ontario.

The passenger steamer Pennsylvania will next month be placed on the route between Erie and Buffalo. She was built at the Wyandotte yards of the Detroit Dry Dock Co. She is a side-wheeler with walking beam engines. Her length is 211 feet; molded beam, 32 feet, and depth of hold, 12 feet. The paddle wheels are 23 feet in diameter and fitted with nine feathering buckets, of 9x4 feet surface dimensions. The engine has a single cylinder 48x108 inches and is condensing. The boilers number two and are of the Scotch type. They are fitted with the Howden hot draft. The dimensions of boilers are 13 feet 2 inches by 11 feet 6 inches. The engines are planned to develop 800 horsepower. The boilers are to be allowed a working pressure of 65 pounds.

A prominent vessel owner is quoted as follows: "I believe that before the end of the season, our interest will be a distinct gainer by the Buffalo strike. Combined with the late opening of navigation, it has contracted the traffic into a

much shorter period than usual, and rates will be correspondingly higher. The losers are the shipping interests, of course, it all gets to the consumer in the end. In Chicago, this means that hard coal will be from ten to fifteen cents a ton more than if there had not been a strike. Corn will be a half cent less to the western farmers. The influence will be widespread, showing how evenly matched under normal conditions are supply and demand in lake business. So slight a disturbance as we have had the past month throws it out of balance." Now that dock labor has seen the error of its ways at Buffalo, it will be purely the fault of the owners of floating property if freights are not held up to fair living rates for the balance of the entire season.

The future of the steel steamer Harlem, which went ashore last fall, rests with the English underwriters. Capt. James Davidson, who visited the wreck, says it was only a question whether the insurance companies wanted to spend enough money to get the boat. Their representative had cabled a full report to London and was now awaiting instructions. When the party visited the wreck they could see the havoc the rocks had made of the steel plates in the bottom. There was, in fact, very little of the bottom left. The rest of the ship was in good shape. The smokestacks stand in position, the sails are still stretched, and, in fact, the steamer looked as if she had been just fitted out and was ready to sail. But to get her afloat again there will be a cost of some \$70,000. The English underwriters paid up a total loss and now want to get something back at a cost of some one who will take hold of the job of releasing the vessel from her stranded position. It appears that Capt. Davidson is not a bit too sanguine regarding her getting afloat again, and after his inspection, others should be mighty chary about bidding on the work.

BIDS FOR NEW NAVAL VESSELS.

Some pressure is being brought upon the Navy Department to postpone for the present requests for bids on the six new unprotected cruisers which were authorized as a part of the program of naval increase at the last session of Congress. But little progress has been made in the preparation of plans for the two warships authorized last winter, and as the leading shipyards are apparently in no hurry to take additional Government contracts, it is doubtful if bids will be asked upon any of this work until the late summer, and only then for the six unprotected cruisers. All the leading shipyards of the country, which have heretofore entered the competition for the construction of warships, have now so enormous an amount of work on hand, both for the Government and merchant service, that their plants are said to be practically incapable of undertaking additional contracts from the Navy Department. There is apprehension that if bids are called for some of the minor firms may submit proposals acceptable to the Navy Department, and thus secure awards, although somewhat inexperienced in the science of warship building. Only three shipyards in the country, it is stated, have the plant, experience and capacity for building the larger vessels of the Navy, but there are a number of smaller firms competent to construct unprotected vessels, and it is this fact that has caused the more important concerns to regard with some apprehension any action by the Department looking toward bids to build the six smaller ships for which no armor is required. The purchase by the Government of the high speed and heavy displacement merchant ships for auxiliary cruisers has led to large orders being given for the construction of vessels to take their place. New steamship lines are also being established between this country, Cuba and Porto Rico, and to supply the steamers for the various systems, many orders have been given in the past six months for the building of merchant ships to engage in this trade. Not in twenty years has greater activity in the shipbuilding line been reported by the larger firms. The Cramps are said to have their plant working to its full capacity, and the same is true of the yard at Newport News. The impressment of merchant ships on the Pacific coast as transports and colliers have resulted in a boom for shipbuilding interests on the West coast.

The degree of completion of vessels under construction for the United States Navy, as shown by the official records of May 1, 1899, is as follows: Battleships—Kearsarge, 90 per cent.; Kentucky, 88 per cent.; Illinois, 65 per cent.; Alabama, 82 per cent.; Wisconsin, 67 per cent.; Maine, 4 per cent.; Missouri, 1 per cent.; Ohio, not started. Sheathed cruisers—Albany, 80 per cent. Monitors—Arkansas, not started; Connecticut, 4 per cent.; Florida, 6 per cent.; Wyoming, 1 per cent. Torpedo boat destroyers—Bainbridge, 7 per cent.; Barry, 7 per cent.; Chauncey, 7 per cent.; Dale, 3 per cent.; Decatur, 3 per cent.; Hopkins, 17 per cent.; Hull, 17 per cent.; Lawrence, 15 per cent.; Macdonough, 14 per cent.; Paul Jones, 5 per cent.; Perry, 5 per cent.; Preble, 5 per cent.; Stewart, 2 per cent.; Truxton, 3 per cent.; Whipple, 3 per cent.; Worden, 3 per cent. Torpedo boats—Dahlgren, 96 per cent.; T. A. M. Craven, 92 per cent.; Stringham, 75 per cent.; Goldsborough, 65 per cent.; Bailey, 55 per cent.; Bagley, not started; Barney, not started; Biddle, not started; Blakely, 25 per cent.; DeLong, 25 per cent.; Nicholson, 31 per cent.; O'Brien, 32 per cent.; Shubrick, 22 per cent.; Stockton, 22 per cent.; Thornton, 21 per cent.; Tingey, 20 per cent.; Wilkes, 6 per cent. Training vessel for Naval Academy—Chesapeake, 78 per cent. Submarine torpedo boat—Plunger, 85 per cent.

Shipments of iron ore from Ashland, Wis., amounted to 86,206 tons last week, making a total for the season of 155,500 tons, and shipments as brisk as they possibly can be.

TRAFFIC ON LARGEST CANALS.

The great canals of the world and the growth of the business passing through them are discussed in a series of tables recently published by the Treasury Bureau of Statistics, in its latest issue of the Summary of Commerce and Finance. The business of the Suez Canal, the Kaiser Wilhelm Canal, the St. Mary's Falls, the Welland and New York Canals, and incidentally the commerce passing through the Detroit River, are given in detail for a term of years, and thus presents statistical data convenient for those desiring to study the question of ship canals connecting great bodies of water.

The Suez Canal shows a net tonnage of 6,576 tons in 1869, its first year; 436,609 in 1870, over 1,000,000 in 1872, more than 2,000,000 in 1875, and a steady increase until 1891, when the figures reached 8,698,777, since which time there has been comparatively little change, the figures for 1897 being slightly below those of 1896, but 33 per cent. in excess of those of 1887, and more than three times those of 1877.

The Kaiser Wilhelm Canal, which has been in operation but three years, shows an increase of 50 per cent. in that period in the tonnage passing through it, that of the first year after its opening being 1,505,983 and that for the fiscal year ending March 31, 1898, 2,469,795.

The St. Mary's Falls Canal, connecting Lake Superior with the lower lakes, shows a more rapid gain than the Suez. The freight tonnage passing through St. Mary's Falls Canal in 1881 is given at 1,567,741, reaching more than 3,000,000 tons in 1885, more than 5,000,000 in 1887, more than 7,000,000 in 1889, more than 9,000,000 in 1890, more than 11,000,000 in 1892, more than 13,000,000 in 1894, and more than 18,000,000 in 1897. Incidentally the freight tonnage passing through the Detroit River, which connects Lakes Superior, Michigan and Huron with Erie and Ontario, is shown to have increased from 9,000,000 tons in 1873 to 23,900,520 in 1896, an increase in that time of 200 per cent., while the increase in the registered tonnage through St. Mary's Falls Canal alone in that time is from 204,446 to 17,619,933.

The Welland Canal tables show that the quantity of freight passed through that canal in 1880 was 819,934 tons, and in 1896 1,279,987, though comparing 1896 with 1872, 1873 and 1874, no increase is found, the figures of 1872 being 1,333,104, and those of 1873 1,506,484, while the tons passed from United States ports to United States ports through the Welland Canal fell from 748,557 in 1874 to 653,213 in 1896.

The New York Canal tables show a steady decrease since 1880 in the tons of merchandise carried to tide water. The number of tons of freight carried to tide water on the New York canals in 1880 was 4,067,402, in 1890 3,024,765, and in 1897 1,878,218, while all other canals mentioned as above indicated show large gains in business meantime.

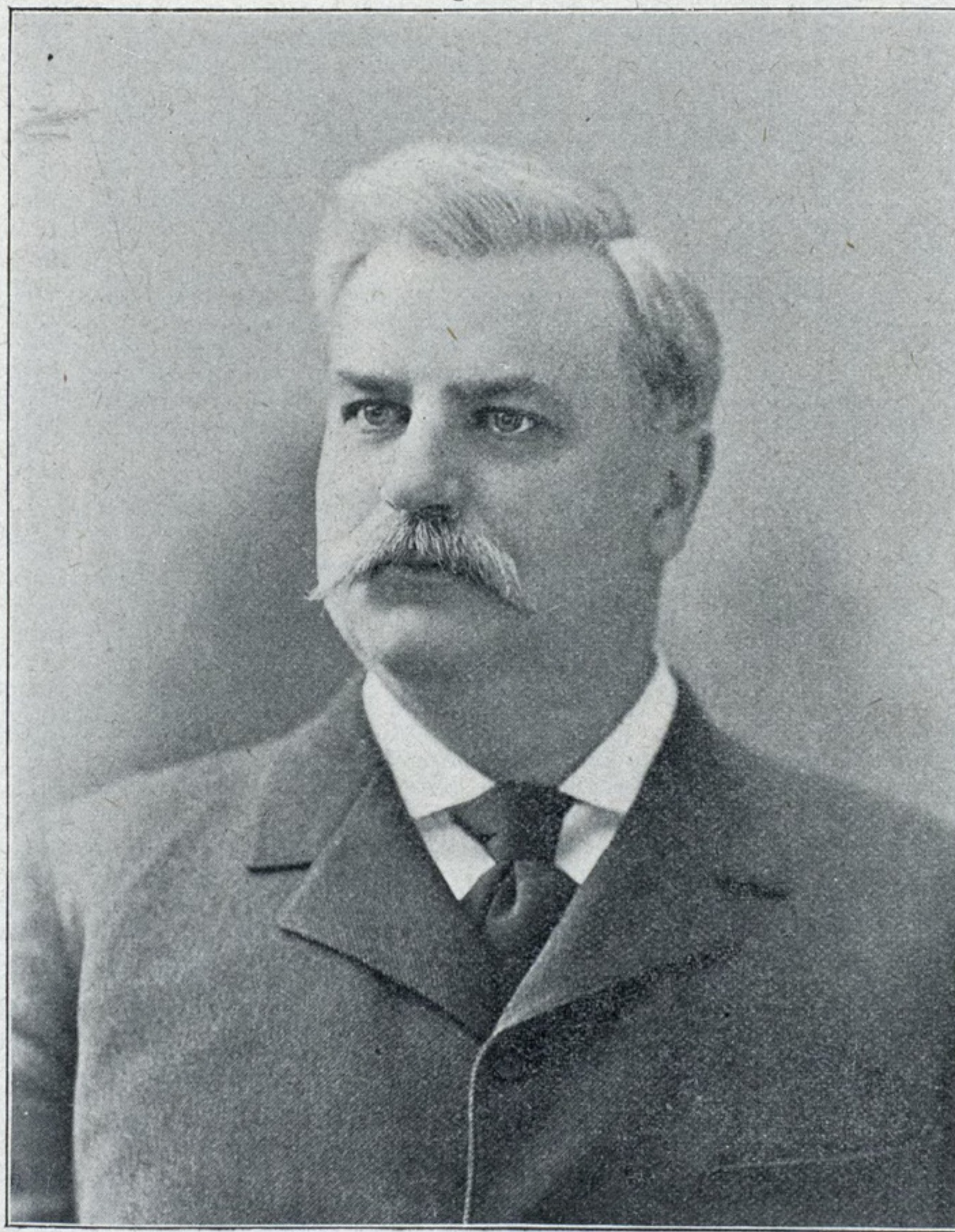
The reduction of freight rates, especially on the Great Lakes and by rail, in competition with the lakes and their canals, is also shown by a series of tables. These show a material reduction in freight rates between Chicago and New York, whether carried by lake and rail, lake and canals, or by all rail, though the reduction where carried by the all-water route of lake and canals is greater than in cases where a part or all of the transportation is by rail. The average rates per bushel for wheat from Chicago to New York by lake and canal were in 1877 11.24c per bushel; in 1887, 8.5c, and in 1897, 4.25c. In the combination of lake and rail freights the rate fell from 15.8c per bushel in 1877 to 12c in 1887, and 7.37c in 1897, while the all-rail freights fell from 20.3c per bushel in 1877 to 15.74c in 1887, and 12.32c in 1897.

Action for Repairs—Evidence of Ownership—Custom-House Register—Admiralty Decree.—In an action for repairs of a steamboat an entry of plaintiff's name in a custom-house book showing the registry or transfer of the boat, is inadmissible to show that plaintiff was a part owner, in the absence of evidence that he authorized the making of the entry. In such action a decree in admiralty against the boat and the papers in the proceeding are inadmissible to prove plaintiff's ownership, where he made no appearance in the proceeding. *Moynihan et al. vs. Drobaz et al.*, 56 Pac. Rep. (Cal.) 1026.

TRIPLE SCREWS.

Rear Admiral Melville's paper on triple screws, read at the recent meeting of the Institution of Navy Architects in England, has excited much interest and discussion abroad. It is subjected, however, to the criticism that the Admiral gives neither names, dates, nor any other particulars in regard to the character of the "two hundred trials of nearly as many vessels" furnishing the data upon which he founds his conclusions. Chief Engineer Harold P. Norton, who read the paper, promised that the required information should be forthcoming. Admiral Melville is entirely confident that his reasoning as to the triple screw problem is sound, and he has such abundant data to maintain his conclusions that he expects in the end to convince even his critics in this matter. He is, meanwhile, meeting the usual fate of those who are in advance of others in their knowledge of a subject. Perhaps when the English naval officers are possessed of the data to which Admiral Melville could only refer in his brief paper, they may accept his conclusions.

SECRETARY GAGE brought up the question, at a cabinet meeting this week, of a flag for the Cuban shipping. About



MR. LUTHER ALLEN.

Ex-President Cleveland Chamber of Commerce and late Secretary and Treasurer of the Globe Iron Works Co.

\$6,000,000 worth of Cuban shipping is tied up and prevented from engaging in international trade because it has no flag to sail under. The question presents many complications and it is recognized that a great injustice is being done to the Cuban owners of ships under the existing state of affairs. Secretary Gage will confer with the Bureau of Navigation regarding the matter in the hope that some solution may be found.

In the case of collision, stranding, etc., only one conclusion can be drawn, viz., that in every instance somebody is to blame, and whatever action is taken to prevent a collision under exceptional circumstances it cannot be justified if it occurs. It stands to reason that if something else had been done other results might have followed, but if it takes weeks to ponder on the pros. and cons. of a certain course that must be decided upon in a moment under considerable mental strain, the possibilities of a different ending should not be accepted as certainties. There always will be casualties at sea, on the lakes, rivers and harbors, nor should those who have been found in fault be too hardly judged.

NOTES.

THE Armstrong Cork Co. have changed their local address at Pittsburg, Pa., from the Monongahela National Bank building to 23d street and Allegheny river.

A CIRCULAR letter sent out from Rutland, Vt., states that Mr. Percival W. Clement has been appointed receiver for the Ogdensburg Transit Co. Mr. James G. Westbrook is appointed general superintendent, with E. J. Lancto as treasurer and Frank Owen general freight agent, each having offices at Ogdensburg. The auditor, Mr. M. H. Chamberlin, has offices with the receiver, at Rutland, Vt.

AN invention named the ellipsoid float has recently been submitted to the Navy Department for use on warships. It is an egg-shaped device, fire, water and burglar proof, to be used for the preservation of gold, silver and other valuables in case the vessel is wrecked. It is designed to float under all conditions of weather, and yet is so heavy as to make it difficult to be broken in. The invention is to rest on a cradle upon the deck of the ship, and will not move until the vessel goes down, when it floats. It is so contrived that the action of the water raises a flag signal, rings a bell, and starts a light which it is claimed will burn for several weeks. Officers who have examined it assert that it would be of great value in preserving the records of a ship in case it went down. The inventor hopes to have all vessels in the Navy fitted with one of these floats.

In the autumn of 1897 eight whaling vessels were caught in the ice in the vicinity of Point Barrow. None of them had supplies to last until spring, which was the earliest date when help could reach them. The subject was thoroughly discussed at a cabinet meeting, and the task of rescuing the ice-bound whalers was assigned to the revenue-cutter service, the officers of which had seen so much Arctic duty. The story of the expedition is told in a most interesting narrative entitled "The Rescue of the Whaler," in Harper's Magazine for June. The article is written by Lieutenant Ellsworth P. Bertholf, of the revenue-cutter Bear, which vessel was assigned for the expedition.

AN impression is gaining credence that the improvement of the St. Lawrence canals is bound to have a helpful influence on shipbuilding on the lakes. This expectation is founded on the claim on the part of some lake ship builders that they are in a position to build certain classes of steel vessels cheaper than they can be turned out at the coast yards. This premise is based solely on mercantile tonnage, and should the Anglo-American commission reach an agreement which will permit the construction of war vessels on the Great Lakes, the prospects will be even brighter. There are lake ship builders who claim that even should a depth of fourteen feet be unavailable this year throughout the entire distance from the Welland to the coast, on account of delay in completing the improvements, the canal will at least be far enough advanced to send to the coast, without cargoes, vessels like the Minneapolis and St. Paul and the steamers now building by the Craig Ship Building Co. of Toledo. Vessels of this kind would be especially suited to Atlantic coast trade.

Collision—Steamers Meeting Head and Head—Signals.—The Catskill and the St. Johns, side-wheel steamers, met in North river in the evening. The Catskill was going up at a speed of about 10 knots, and the St. Johns coming down at a speed of about 13 knots. Both carried the regulation lights. When about one-third of a mile apart, the Catskill gave the signal for passing to the left, which was at once contradicted by the St. Johns. Both vessels sheered to the westward, and the same signal was again given and contradicted. Both vessels then reversed, but a collision followed almost immediately, in which the Catskill was sunk. Each vessel claimed that when the signals were first given the other was further to the eastward. Held, that the evidence established that the vessels were approaching about head and head, and the Catskill was in fault for not passing to the right, as required by the rules, and also in further violating the rules by failing to reduce speed to bare steerageway at once, on the first contradiction of her signal, both of which faults were immaterial. In re Central R. R. of New Jersey, 92 Fed. Rep. (U. S.) 1010.

NOTICE TO MARINERS.

UNITED STATES OF AMERICA—NORTHERN LAKES AND RIVERS—OHIO.

TREASURY DEPARTMENT.
OFFICE OF THE LIGHT-HOUSE BOARD,
WASHINGTON, D. C., May 19, 1899.

CLEVELAND WEST BREAKWATER (EAST END) LIGHT STATION.—Notice is hereby given that the sounding of the 10-inch steam whistle at this station, inside the easterly end of the west breakwater, westerly side of the entrance to Cleveland harbor, discontinued March 29, 1899, will be resumed, during thick or foggy weather, on or about June 1, 1899, without change in characteristics.

PRESQU'ILE LIGHT STATION.—Notice is hereby given that the color of the brick tower at this station, on the northerly shore of Presqu'ile Peninsula and about three miles to the westward of the entrance to Erie harbor (Presqu'ile Bay), Lake Erie, has been changed from red to white.

By order of the Light-House Board:

FRANCIS J. HIGGINSON,
Rear Admiral, U. S. Navy, Chairman.

LIGHT-HOUSE ESTABLISHMENT,
OFFICE OF THE LIGHT-HOUSE INSPECTOR, 10TH DIST.,
BUFFALO, NEW YORK, May 20, 1899.

The light in Lower Narrows, gas buoy No. 2, St. Lawrence river, New York, was temporarily discontinued on May 13, 1899, for repairs, which will be made as soon as practicable.

FRANKLIN HANFORD, Commander U. S. N.,
Inspector 10th Light-House Dist.

LAKE ERIE—CLEVELAND HARBOR—CAUTION.—Information has been received from Col. Jared A. Smith, Corps of Engineers, U. S. Army, that all vessels entering and leaving Cleveland harbor from or for the east are requested to use the main channel (between lights) instead of entering at east end of breakwater now under construction.

As soon as the breakwater is completed all obstructions will be removed and vessels again will be able to enter and clear with safety to themselves and without damage to the work now in progress.

LAKE ERIE—OHIO—FAIRPORT, ASHTABULA, AND CONNEAUT HARBORS—DREDGING OPERATIONS.—Information has been received from Col. Jared A. Smith, Corps of Engineers, U. S. A., that dredges are now at work at Fairport and Ashtabula harbors, deepening their channels to 21 feet, and that in about two weeks dredges would be at work in Conneaut harbor for a similar purpose.

DOMINION OF CANADA.

1. BURLINGTON BAY INNER LIGHT.—On the 15th inst. a post double light will be established on the inner end of the south pier of Burlington canal, west end of Lake Ontario, to guide to the canal from Hamilton and Burlington Bay.

The post will be 20 feet high and, with the braces and fittings, will be painted white. It will stand on the block at the extreme inner end of the south pier and will be distant 1,300 feet S. 67° W. from the main tower.

The light will be a double light, including a fixed red light shown from a square tubular lantern hoisted to the top of the post, elevated 24 feet above the level of the bay and visible from all points of approach in Burlington Bay; and a fixed white light shown from a similar lantern on the same post 6 feet vertically below the red light, and visible in the same directions. The two lights are adopted to distinguish them from railway or steamer lights.

2. DISCONTINUANCE OF MICHAEL POINT LIGHT.—In consequence of the establishment of range lights at South Baymouth and the shoal nature of the entrance to Michael Bay, it has been considered advisable to permanently discontinue the exhibition of the fixed white light heretofore maintained on Michael Point, south side of Manitoulin Island, Lake Huron.

F. GOURDEAU,

Deputy Minister of Marine and Fisheries.

Department of Marine and Fisheries,
Ottawa, Canada, May 4, 1899.

All bearings, unless otherwise noted, are magnetic and are given from seaward, miles are nautical miles, heights are above high water, and all depths are at mean low water.

Pilots, masters or others interested are earnestly requested to send information of dangers, changes in aids to navigation, notices of new shoals or channels, errors in publications, or any other facts affecting the navigation of Canadian waters to the Chief Engineer, Department of Marine and Fisheries, Ottawa, Canada.

CHARLES E. KREMER.

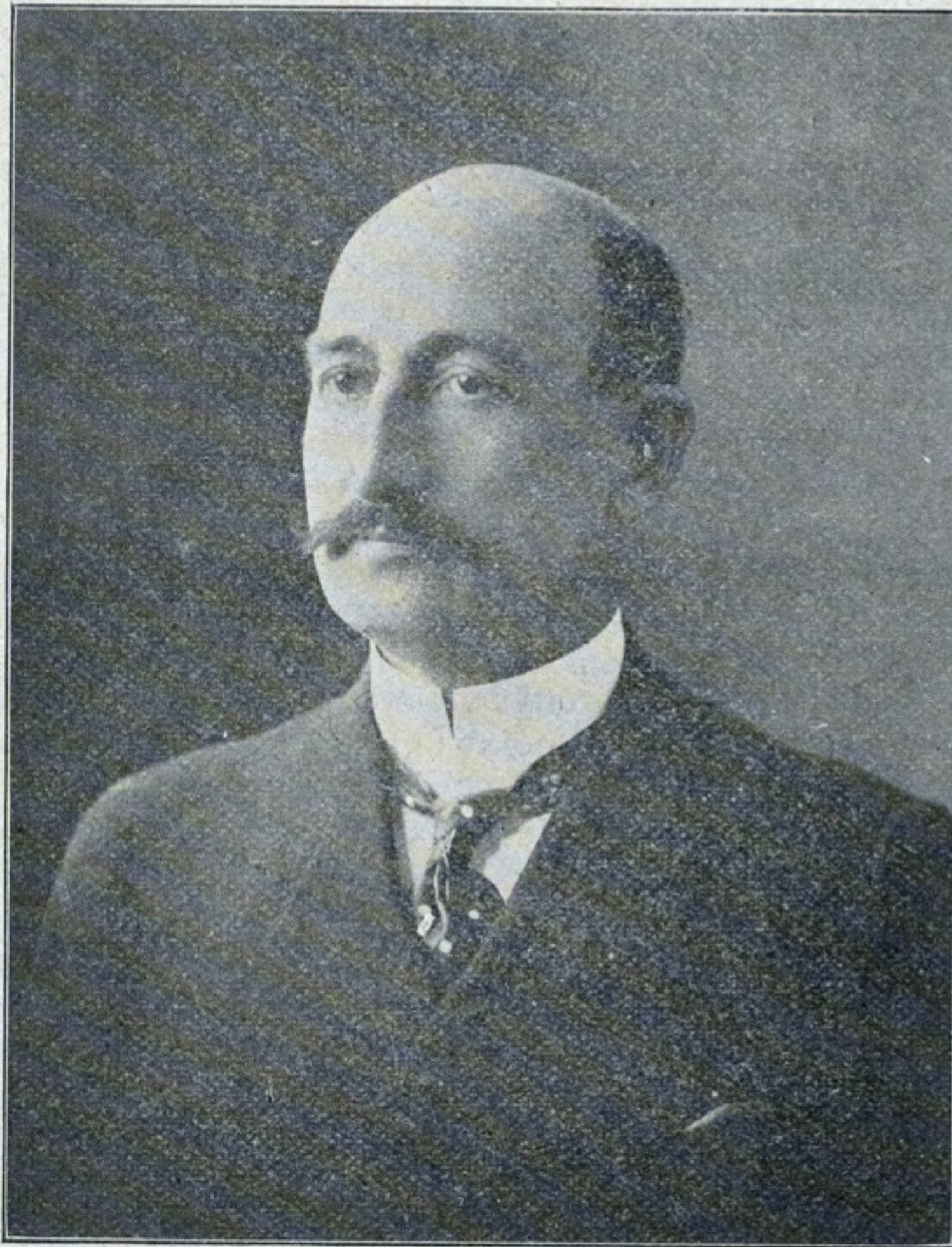
Charles E. Kremer, Esq., admiralty lawyer, Chicago, Ill., was born at Oshkosh, Wis., December, 1850, and was brought up there, taught school and entered upon a mercantile pursuit.

In the year 1871, Mr. Kremer entered the law offices of H. H. & G. C. Markham, at Milwaukee, where he studied law and was admitted to the bar in October, 1874. In April of the following year, Mr. Kremer severed his connection with the well-known Milwaukee firm of Messrs. Markham and began the practice of law at Chicago, in May, 1875, or just twenty-four years ago, making admiralty practice a specialty, having studied particularly in that branch of the law.

Mr. Kremer at once took an active interest in yachting and was the first secretary of the Chicago Yacht Club, organized in 1875. After drawing up the original rules, by-laws and constitution, he has ever since been an officer of the club and is at present one of the trustees. For a number of years the subject of our brief sketch has been a lecturer on maritime law and admiralty practice in the Chicago College of Law.

Through the courtesy of Robert Rae, Esq., Chicago, who is Mr. Kremer's principal competitor in admiralty practice we have been enabled to gather the following additional particulars:

Mr. Kremer recently dissolved his relation with Mr. Schuyler and has now established himself in the New York



CHARLES E. KREMER, ESQ.

Life Building, where he will continue to practice law in all the branches of the profession.

Like most men in the West, who have distinguished themselves in their chosen career, he is emphatically a self-made man. Upon coming to Chicago, he placed his ideal in his profession at a very high standard and labored day and night to reach this ideal. He is a man of studious habits and brimful of fun. In his mental composition he unites severe logical ability with a lively imagination and with a humor that reminds one of the old type of black letter lawyers, who in a most severe and didactic discourse, which knits the brow of the judge to keep the line of his argument, with a flash of humor and wit that sets court and audience in a broad smile. These jeu d'esprit are always cognate and grow out of the subject in hand and are never forced, or what is sometimes termed far fetched. In admiralty law he deservedly stands in the first rank of his profession. He is also a standard authority on insurance law and has been the advisor of some of the leading underwriters in the Northwest. As a story-teller at after-dinner parties it is not saying too much when one says that he is quite as good in his line as Chauncey Depew, who, by the by, he somewhat resembles in personal appearance. He is a good German scholar and has made considerable progress in French, and has a facility for mastering these languages, which is very rare. In the last ten years he has tried more admiralty

cases than all the rest of the profession in Chicago put together and with marked success.

He is now in the prime and vigor of life and is broadening his professional career by taking up a general practice. His knowledge of men, his good sense and excellent judgment make him a very formidable jury lawyer. Added to these accomplishments his reputation for integrity is unblemished. This gives him great weight before the courts. He is frank, open and just to his clients, to his opponents and to the Courts. He is not a technical practitioner and never takes an unfair advantage of his opponent.

ADOPT COAST-WISE RULES.

SANDUSKY, O., May 23d, 1899.

To the Editor of The Marine Record:

In the issue of the RECORD of the 10th instant, I find a note stating that "The British have a great many more ships than the United States, but that they cannot get their goods carried to any part of the world for less cost for proportionate distance than can our merchants. Under such circumstances what greater folly could be committed than to subsidize a shipping trust to do for us at larger cost a service which others stand ready to do for us at a lesser cost?" I am of the same opinion, and believe that if the facts by you so tersely stated could be brought to the full knowledge and understanding of the American Congress, the great subsidizing schemes, gotten up for the special benefit of the very few owners and builders of great fast going ships in this country, would be sat down upon with a heavy hand. Every one knows that the scheme is being worked up for the especial benefit of the few to the detriment of the many, especially those great as well as the smaller ships that carry 90 per cent. of the world's commerce.

As you say "all maritime nations are competing for our foreign carrying trade," and they will get it if they can carry it at a less price per ton than the American ship owners, this they will do no matter what the subsidy, unless a law should pass prohibiting American goods being carried in foreign bottoms, and that they can't do. We have our coast-wise laws, and the foreign bottoms cannot under those laws compete, or interfere with our inter-state or coast-wise carrying trade, without paying the custom house charges, and they can't afford to do that. I think that the same rules and regulations should be extended over all our new colonial possessions. The same rule that applies to the trade between Cleveland and Sandusky, Detroit, Buffalo, or Chicago and Duluth on the lakes, or between New York and Boston, and elsewhere on the Atlantic or the Pacific, should be extended to Havana, and Porto Rico, to Honolulu, and Manila, or any other port in the Atlantic or Pacific, that is under the control of this Government. All should come under the same domestic coast-wise rules and regulations, by so doing the American merchantman would have all the favoritism that they should be entitled to. There should be no more open door business with our new possessions, than there is in our coast-wise trade here at home in the United States proper. When we purchased Alaska, or shortly after, as I understand it, the same laws as to the coast-wise rules and regulations were extended over that territory as fast as possible, that governed at home. That is my opinion, what do you think of it? I am in full accord with what you say in the above quoted statement.

S. C. WHEELER.

EASTERN FREIGHT REPORT.

Messrs. Funch, Edye & Co., New York, reports the following freight situation to the RECORD for the week:

The position of our markets for steam tonnage remains practically unchanged, the supply of prompt steamers being very limited, and the demand somewhat checked, owing to enhanced price of cereals; the continuation of the strike of grain shovellers at Buffalo keeps supplies of grain at this port unusually low for this season of the year, and, in consequence, shipments from New York are restricted. Charters for timber cargoes have been somewhat more liberal at satisfactory rates. Freights from the deal ports show a hardening tendency in sympathy with current grain freights, but the volume of business consummated is not large. Time charters have evidenced more disposition to take tonnage for Autumn delivery at rates ruling in the neighborhood of 7s. for large steamers, and further tonnage can be readily placed on this basis.

There is no change in the condition of our market for sailing vessels. The supply is not abundant, but the demand is limited, and, under these circumstances, it is only natural that rates are without material change.



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CLEVELAND, O., MAY 25, 1899.

THE two or three thousand laborers at Buffalo have again resumed work. The next time that they refuse payment for services rendered, other help should be employed.

THE Chicago Board of Trade, as well as the Toledo Produce Exchange, found that they had not fully understood the recent labor conditions existing at Buffalo and rescinded their former resolutions regarding the contract held by Mr. Conners with the Lake Carriers' Association.

THE work of vaccinating sailors is now being pushed at all upper lake ports, and within a few days all danger from the spread of smallpox will be over. Marine Hospital surgeons, who have charge of the work, say they are well pleased with the co-operation vessel owners' and masters have given them up to date, as only in a very few cases were objections raised to the instructions and orders issued by the Marine Hospital Department.

ATTORNEY-GENERAL Griggs, of New Jersey, says of trusts: "With reference to these large combinations of capital which are now forming, my own judgment is that the danger is not so much to the community at large as it is to the people who are induced to put money into the purchase of the stock." But if a multitude of people put their money into such stocks and lose it, is not the effect upon the community going to be rather serious? Can the members of the community be injured and the body remain sound?

ATTENTION is called to the abstract of proposals for dredging harbors on Lake Michigan as submitted by the several contractors to Capt. J. G. Warren, Corps of Engineers, U. S. A., stationed at Milwaukee. These figures appear to show an understanding between the dredging contractors on prices. One bidder asks 17 cents per yard while the contractor living at that port agreed to do the work for 9 cents. In the three several instances, the home contractor or the one nearest to the point of work is permitted to become the lowest bidder. Contractors on government lake work have frequently been warned of the ultimate result of collusion in submitting bids on government contracts, and in a few bids there has been bona fide competition, yet, in the majority of cases the figures simply speak for themselves, thus carrying with them their own judgment. It is becoming almost imperative for the several district engineer officers in charge of the conservancy and improvement of rivers and harbors to have their own plant, as, in many cases, the cost of a good modern dredge might be saved to the government in one season's work. Two or more dredges, at least, ought to be placed at the disposal of the engineer having charge on each lake, and thus put a stop to any unfair collusion between private contractors.

CANAL-BORNE COMMERCE.

The bulletin issued by the Treasury Bureau of Statistics in regard to the business of the great canals of the world once more brings into prominence the importance of the St. Mary's Falls canal in comparison with the other great canals of the world, and incidentally the magnitude of the commerce of the Great Lakes.

The tonnage of the Suez canal reached its maximum in 1891, when it was 8,698,777. Since that time there has been comparatively little change, the figures for 1897 being slightly below those of the preceding year.

The other great canal of the world is the Kaiser Wilhelm canal between the North sea and the Baltic. Its tonnage for the fiscal year ending March 31, 1898, was 2,469,795.

The tonnage of the St. Mary's Falls canal for 1897 was 18,000,000, or more than double that of the Suez canal. The freight tonnage passing the Detroit river in 1896 is given as 24,900,000.

The tonnage passing through the Welland canal in 1896 was 1,279,987, which is no more than it was twenty-five years before.

The tonnage passing through the Erie canal was in 1897 but 1,878,218, or considerably less than half what it was in 1880.

The business of the Sault Ste. Marie canal has continued to increase enormously year by year, while that of the other great canals of the world has been at a standstill or decreasing within the last few years.

The commerce of the Great Lakes has grown to gigantic proportions and is still growing.

THE PARIS STRANDING.

The suggestion relative to there being an abnormal local attraction on compasses on the fringe of the English southwest coast line is rather far fetched at this late date. Millions of craft have used the route and shaped safe courses. If the recent sad loss of the Mohegan and the lives that she took with her was a mystery, the stranding of the Paris, may, or will show precisely how and why she fetched up on the Manacles, a vessel never can go anywhere only where she is pointed for according to the course made good, and, as certainly as the Paris fetched up where she did, just so sure is it that she was heading for that direct spot. We do not wish to be in any way premature in offering suggestions, or judging from this distance, prior to a full, free and complete investigation of the casualty by the proper and eminent authorities. Yet, we would like to say, that during the inquiry into the cause of the stranding of such a well officered and strictly navigated noble ship as the Paris was, the evidence of some of the best informed masters of coasting vessels, channel pilots and fishermen should be solicited and given due weight before a verdict is reached. The Mohegan was horsed to the northward of her course, so was the Paris and the fine East India steamer that brought up on Lundy Island at the same time that the Paris was finding the Manacles and reached there under the same conditions that prevailed when the bottom of the Paris was so positively punched. On due inquiry it will no doubt be found that after certain stages of atmospheric disturbances, an unusual period of prevailing winds, or, and, coupled with barometrical indications, that there is a strong westerly indraft and this too varying well to the southward of west. Such conditions, we opine, are not prevalent, and occur only under the certain conditions we have briefly suggested, therefore, we look to see the hint thoroughly investigated and the weather conditions existing for several days previous to the trio of strandings fully portrayed before the Board of Inquiry having the matter in charge. The large East India steamer bound down the Irish Sea or St. George's channel and fetching up on Lundy Island, at the mouth of the Bristol channel, was horsed into that bight only after she had opened up the sweep of the Atlantic and caught the full benefit of the unusual westerly current on her starboard side. The Paris after leaving Cherbourg, shaped a northerly course to clear the Channel Islands and thereby got the heft of the current on her port side as the Mohegan did, all of which goes to show that those having the hydrographic work in charge for the British government have been too lax in their observations and surveys, for which the Board of Trade visits the evil upon the shoulders, pockets and reputation of the shipmasters having charge of their tonnage; thus, in a measure, taking away their livelihood on account of the culpable ignorance manifested by those who prepare his charts and compile inadequate, if not misleading

sailing directions, etc. As we have said, that locality has been too long used and too numerously navigated for any authority to foist upon the community occasional waves of such intense magnetic attraction, extending over a particularly limited area, as to plug a compass anyway it pleases. Furthermore, it will no doubt be shown that the compasses were of the best make, well and accurately adjusted, with the deviation card kept up to date, and strictly correct on all headings. If such a showing transpires, then it will be in order for the British admiralty to enter into a series of observations, and either on the charts which they issue, or through the publication of revised sailing directions, etc., inform the marine community of the singular changes in currents around that beast of theirs—the Lizard.

THE chief obstacle in the past to the construction of a trans-Pacific cable was found in the fact that mid-ocean resting places could not be satisfactorily obtained or arranged for, no single government controlling a sufficient number of suitable landing places to make this seem practicable, in view of the belief that the distances from which messages could be sent and cables controlled were limited. With landing places at Hawaii, Wake Island, Guam and the Philippines, however, no section of a cable stretching from the United States to Asia and touching at these points would have a length equal to that now in daily operation between France and the United States. The length of the French cable from Brest, France, to Cape Cod, Mass., is 3,250 miles, while the greatest distance from land to land on the proposed Pacific route would be that from San Francisco to Hawaii, 2,089 miles, that from Hawaii to Wake Island being 2,040 miles, from Wake Island to Guam 1,290 miles and from Guam thence to Manila. All interests point to the great commercial opportunities opened up to the United States through the events of the past year. The Hawaiian, Ladrone and Philippine Islands, which have come into our possession so recently, are bases for direct water and cable communication with the enormous traffic of Asia such as no other nation possesses. To these advantages add a Nicaraguan ship canal, more American over-sea tonnage and who will question that a very much greater share of the Asiatic trade will speedily be ours, since no other great nation is in such close proximity to it as are we now that the island groups referred to have passed under our flag.

WHILE it is a mooted question whether under the constitution the United States can hold its territories as separate and distinct from the states, denying American citizenship to their inhabitants, it should not be overlooked that the latest decision of the United States Supreme Court in which this question was involved, held that the constitution does not contemplate or authorize a colonial system, and that to the contrary the constitution provides for territories as the first step to statehood. Under the Dred Scott decision the Philippines, Porto Rico and Cuba, if it becomes a part of American territory, cannot be deprived of the rights guaranteed by the constitution. There must be absolute free trade between the states and territories, the same as now exists between the states and New Mexico, and the citizens of these territories cannot be excluded from the states.

AMERICAN bridge builders scored another victory over foreign competitors this week when the Phoenix Bridge Co., whose works are located at Phoenixville, Pa., and the executive offices who figured were awarded the contract for six additional steel bridges by the Russian government for use on the Great Trans-Siberian Railroad, which that government is building. This makes eighteen bridges the Phoenix Co. is constructing for Siberia.

IN the Ohio-Siberian-Mather case the United States Court of Appeals ordered the mandate recalled and a new mandate issued in favor of the Ohio people, including interest. The case involves a steamboat collision and has been hanging fire in the courts for eight or ten years. The action of the court probably disposes of it for good.

THE fortifications in New York harbor are to be improved by the War Department with a number of first-power searchlights. The principal stations will be Sandy Hook, Norton's Point, Quarantine, Fort Wadsworth, Fort Hamilton, Romer Shoals, Fort Schuyler and Willet's Point.

LOSS TO CHICAGO THROUGH THE BUFFALO STRIKE.

It is computed that every day that the tie-up of the grain fleet continued because of the strike of longshoremen at Buffalo, the commerce of Chicago diminished to the extent of almost \$1,000,000. The aggregate loss to the Chicago trade by the paralysis of through lake traffic is placed at \$15,700,000.

It should, however, be borne in mind that Buffalo is not entirely the hub of lake commerce, and that the interruption to business was greatly exaggerated. At no time was over 8 per cent. of the carrying capacity of the lake marine tied up at Buffalo, and much of the time not over 4 per cent. was tied up. Curious results were obtained by comparing this season with last. Last year navigation opened in March, and business was under full headway the first week in April. This season the Straits of Mackinac did not open until the last week in April, and little was done before May 1. Yet the difference in the volume of business was ascribed to the Buffalo strike, notwithstanding the fact that prominent vessel owners almost voluntarily agreed not to charter for Buffalo at all unless the Chicago Board of Trade as well as the Buffalo grain scoopers did not soon come to their senses.

The port of Chicago figures from custom-house statistics principally and from other incorrect sources, as follows: The enforced idleness of the 5,000 coal shovellers, coal yard employes, grain trimmers and dock laborers entailed a loss of wages amounting to \$200,000.

The effect of the strike on the Chicago trade is shown by comparative figures of the river custom house office on the movement of vessels for the corresponding periods this year and last. Arrivals have been as follows: To May 20, 1899, 437; to May 20, 1898, 943. The clearances have been: To May 20, 1899, 424; to May 20, 1898, 893.

Of the estimated direct loss of \$15,700,000 to the lake trade of Chicago by reason of the strike \$10,700,000 has been in shipments and \$5,000,000 in receipts.

The following figures give the falling off in Chicago shipments up to May 20 from the normal lake trade:

	Value.
Wheat, 6,000,000 bushels.....	\$ 4,500,000
Corn, 8,500,000 bushels.....	2,800,000
Oats, 1,200,000 bushels.....	300,000
Other cereals, 1,000,000 bushels.....	300,000
Flour, 200,000 barrels.....	1,200,000
Glucose, 20,000 barrels.....	200,000
Lead, 100,000 pigs.....	400,000
General merchandise, 100,000 packages.....	1,000,000

Total.....\$10,700,000

The falling off in receipts for the same period is given in the records of the custom house as follows:

	Value.
Coal, 300,090 tons.....	\$1,500,000
Salt, 100,000 barrels.....	250,000
Groceries, 70,000 packages.....	200,000
Drugs and chemicals, 40,000 packages.....	150,000
Hardware, 20,000 packages.....	100,000
Sugar, 150,000 packages.....	300,000
Dry goods, 20,000 packages.....	500,000
General merchandise, 200,000 packages.....	2,000,000

Total loss in receipts.....\$5,000,000

Commerce between the smaller lake ports, the lumber traffic and the ore traffic was unaffected by the tie-up. The tonnage that reached Chicago was but one-third of that of the corresponding period last year. There was an average of forty-six vessels a day entering and leaving the Chicago river the first twenty days of May, compared with ninety a day a year ago. Where five boats passed through the south branch a year ago, only one has been moving there since the Buffalo tie-up, all of which goes to show that not only the Buffalo grain scoopers paid dearly for the strike, but that they inflicted untold misery on thousands of their fellow workmen at Chicago and other ports.

TO FREE WELLAND CANAL OF TOLLS.

Mr. James A. Campbell, of Montreal, states as follows: "A short time ago a gentleman interested in our transportation problem asked me what my objections were to taking the toll of a quarter of a cent a bushel off the Welland canal.

My answer substantially was that the money contributed by traffic on grain through the Welland canal, represented a contribution from American trade via Ogdensburg, for the privilege and advantage accruing to themselves through the capital invested by our people. It seems fair that the Americans should pay their share. The money contributed

by traffic on the St. Lawrence from Montreal to the sea is a purely Canadian contribution, and surely our own country should come first.

My humble suggestion is, that the receipts from the canal be capitalized, and the money spent quickly on the very necessary improvements between Montreal and the sea. These improvements would take a cent and a half a bushel at least in the gross charges off our own route—and the reduced expense would represent a clear gain to purely Canadian trade.

When we have our charges to the sea reduced to a minimum, we may afford to be magnanimous. A free Welland places the American-Canadian end first—and will be of greater advantage to the Americans than to ourselves—unless our government makes our port of Montreal a really free port at the same time.

IRON ORE SHIPMENTS.

Shipments of iron ore from the several ports during five years past are recorded in the following table:

PORTS.	1898.	1897.	1896.	1895.	1894.
Escanaba.....	2,803,513	2,302,121	2,321,931	2,860,172	1,644,776
Marquette.....	2,245,973	1,945,519	1,564,813	1,079,485	1,424,850
Ashland.....	2,391,688	2,067,637	1,566,236	2,350,219	1,738,590
Two Harbors.....	2,093,245	2,651,465	1,813,992	2,118,156	1,373,253
Gladstone.....	335,950	341,014	220,887	109,211	79,208
Superior.....	550,493	531,825	167,245	117,884
Duluth.....	2,630,610	2,376,064	1,988,932	1,598,783	1,369,252
Total by lake.....	13,650,788	12,215,645	9,644,036	16,233,910	7,629,829
Total by rail.....	253,993	290,792	195,127	118,394
Total shipments.....	13,650,788	12,469,638	9,934,828	16,429,037	7,748,223

Of the total iron production of the world 75 per cent. is shipped from Lake Superior mines.

In 1894, 6,350,825 tons was received at Lake Erie ports; in 1895, 8,112,228 tons; in 1896, 8,026,432 tons; in 1897, 10,120,906 tons, and in 1898, 11,028,321 tons. The average rate of freight paid from the head of Lake Superior was 59 cents per ton.

LAKE FREIGHTS.

Grain chartering is now brisk and the offerings are better than the rates on iron ore, which stands at 75 cents from the head of the lakes and 60 cents from Escanaba. Marquette is quoted at 70 cents, but no charters at that figure have shown up this week.

From Duluth $2\frac{3}{4}$ cents on wheat is wanted, but shippers stick strongly to $2\frac{1}{2}$ cents.

Buffalo offers 50 cents on coal to Lake Michigan, and the rate was paid on a special cargo from an Ohio port to Milwaukee, but 40 cents is the going rate with 30 cents to Lake Superior.

On wheat, Fort William to Buffalo $2\frac{1}{2}$ cents is the going rate, and $1\frac{1}{2}$ cents on corn from Chicago, $1\frac{3}{8}$ cents to Port Huron and $3\frac{1}{4}$ cent to Kingston.

The market is strong and freight rates are entirely in the hands of those owners who have not fixed all of their tonnage ahead for the next few months.

Shippers are inclined to squirm at any advance but grain, coal and iron ore must be carried even at advanced freight rates if vessels hold out for it.

MARINE BOILERS.

The recent trouble with boilers of the Cunard liner Pavoia (writes a correspondent in the English Mechanic), may help to attract attention to this interesting subject. How is it that the "smoke nuisance" is such an unfortunate "blot" on steam vessels? Nowadays, with the high-pressed steam, the water-tube boilers are naturally in favor, because they raise steam so quickly; but the funnels still belch forth the black smoke as of yore. What are the real reasons why the funnels of steamers cannot be made to be as free from smoke as the "stacks" we can see at factories on land? There must be a great waste of fuel in the black smoke issuing from the funnels of steamers, and there ought to be a small fortune for the man who can prevent it. In the case of stationary boilers, great improvements have been made, and there is, comparatively speaking, very little combustible fuel allowed to escape, but with the boilers of steam vessels there are still clouds of black smoke carrying away fuel and annoying the passengers "abaft the funnel." The efficiency of the modern steam boiler, from an evaporative point of view, is much greater now than it was fifty years ago, but I find an American writer (Mr. E. P. Watson) saying:

"Although modern boilers are a great advance upon the crude evaporator of fifty years ago, the changes made have

been gradual. Engineers seeing the sluggish-action of the cylinder boiler, put in two flues running the entire length of it; and, finding that no disasters occurred, as had been predicted by some timid souls, then went further and made the tubulous boiler, or return tube boiler, which is to-day in general use. It is a boiler which is easy to make and is cheap for the reason that it is all machine work, but it requires a more or less cumbrous brick setting, so the ultimate cost is but a little less, if any, than other types. Return tubular boilers, when properly set and carefully managed, will show excellent evaporative efficiency, 9lb. and 10lb. of water per pound of coal is not unusual, although this is higher than the average rate. Add to this that repairs are light if oil is kept out of the boiler, and we have cogent reasons for its popularity."

Apropos of this statement it may be added that a book from the pen of M. Bertin, well known in this country as a member of the Institution of Naval Architects, the chief constructor of the French navy, and head of the technical service of the ministry of marine, has just been issued, dealing with the all-important subject of marine boiler construction and working. This is of the highest interest and value at the present time, especially as it is introduced to the English speaking public by our own chief constructor, Sir William H. White. The conjunction of the names of these two eminent practical scientists in a work which has a direct bearing upon the first line of attack or defence of both countries, which, in fact embodies the results of the long-trying, patient experiments of one of them, affords a happy assurance, if any were needed, that the rivalry between the French and British navies is to be strictly limited to the field of scientific research.

In the preface Sir William White calls attention to the most interesting portion of the book—that dealing with tubulous boilers. He says frankly that "all English naval architects and marine engineers are happy to acknowledge the lead which their French colleagues have taken in this matter, and the benefit which they have obtained from French experiment and experience with tubulous boilers."

Tubulous boilers (M. Bertin states) should on no account be used on board vessels where the loss of feed water, during its cycle in passing to and from the engines, exceeds 5 per cent., and where this loss is made up from the sea, and more especially if the engineer in charge thinks it beneath his dignity to keep a sharp lookout on the stoke-hold.

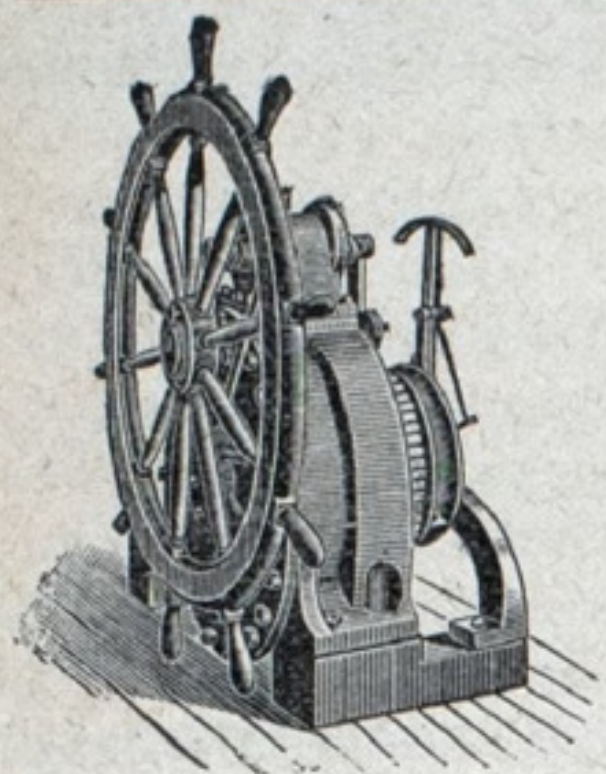
There is a fatal prejudice on the subject of boilers which has to be overcome. They are by no means of such simple construction as is often supposed, nor is their management so easy. At present there is no problem in the design and construction of engines which approaches in difficulty those encountered in boiler design; there is no post in the engine-room which necessitates so much constant care, and at times so much ability, and presence of mind, as is required for the proper management of the boilers.

CARGO CARRYING RECORDS.

Early last season the steel steamer Andrew Carnegie put the broom at her masthead with a cargo of 230,000 bushels of corn, 6,440 tons, and the schooner Polynesia led her class with 5,729 tons of ore. Soon there came the steamer Linn with cargoes of 6,314 tons of ore and 6,496 tons of corn, and the schooner Australia, a sister craft to the Polynesia, carried 6,316 tons of wheat. A little later the Superior City took the lead with loads of 7,463 tons of corn and 7,562 tons of ore. Then came the schooner John Fritz and carried out of Duluth 7,795 tons of ore, and her sister craft, the Roebeling, took 7,865 tons. The steamer Morse, 25 feet longer than the Superior City, has not carried so large a cargo and is not intended to do so, having other functions that her builders deem more important. All of these vessels are of what is known as the 400-foot class, the Morse being 475 feet long and the Carnegie, the shortest steamer of the lot, 420 feet. A cargo was carried last season by the Mohawk that was valued at \$500,000. It was copper and flour. The 7,562 tons of ore carried in one load by the Superior City was discharged in twelve hours, 143 men engaged in the labor. The Carnegie took 332,100 bushels of oats at a cargo, almost an elevator full.

The Atlantic Transport Co. has sold the steamer Missouri to the Navy Department for use as a hospital ship. The company loaned the Missouri to the government as a hospital ship at the outbreak of the war, and the company paid expenses of manning and operating the steamer for nearly a year. For this the president of the company was presented with a gold medal by Congress.

Queen City Patent Hydraulic Steerer.



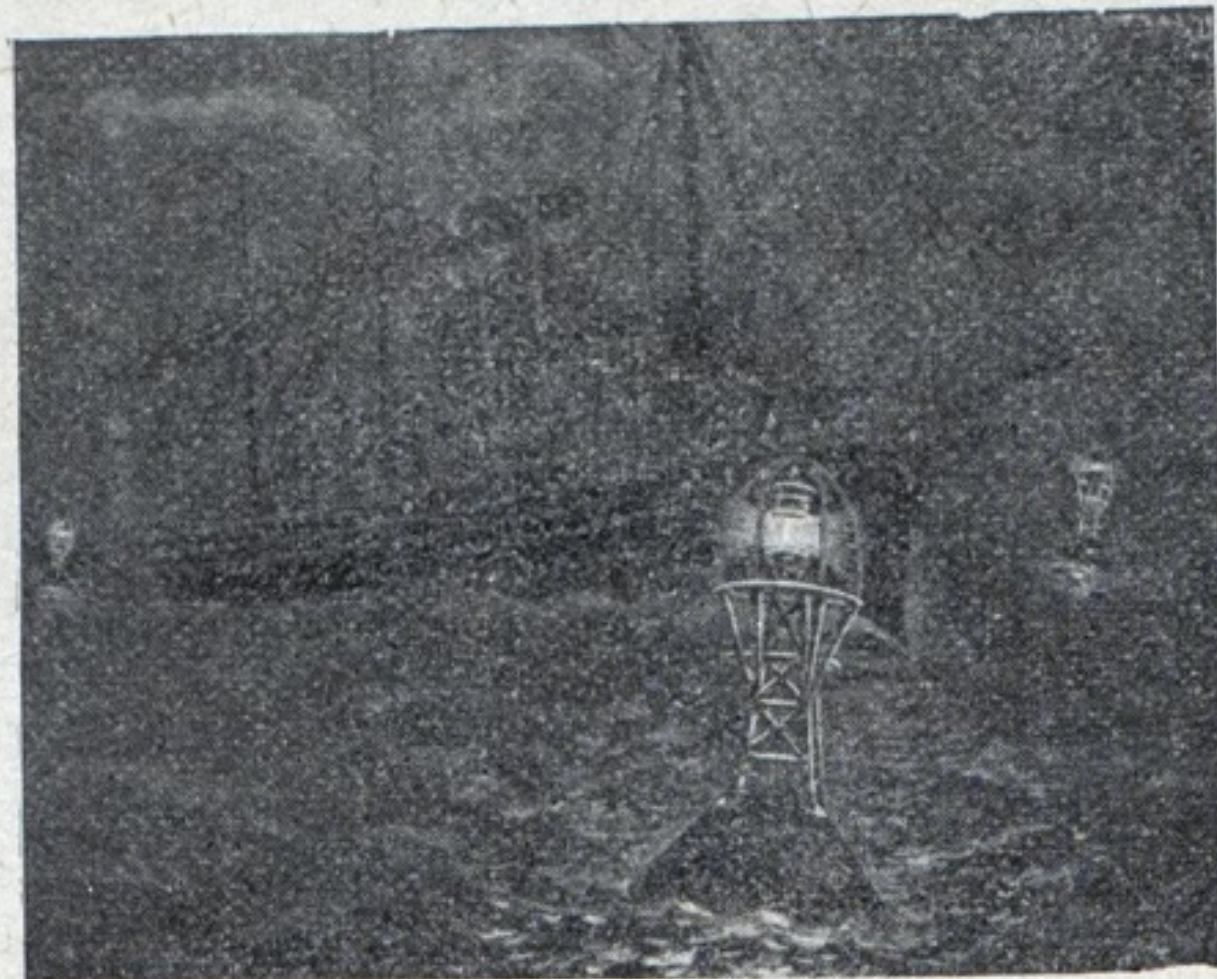
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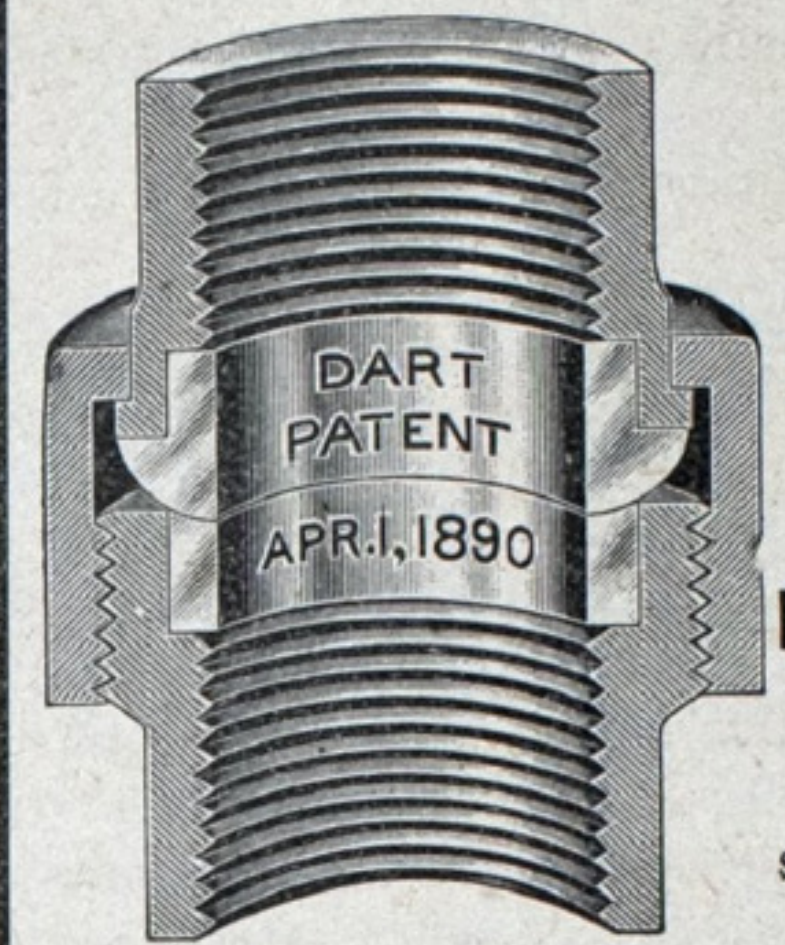
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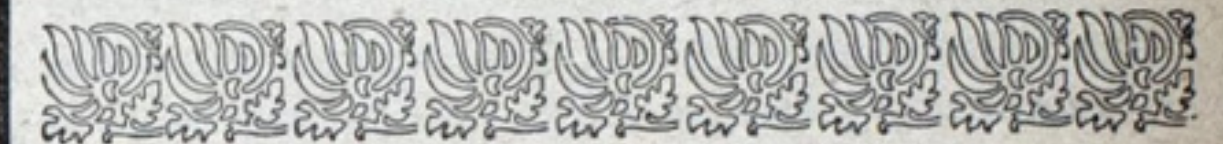


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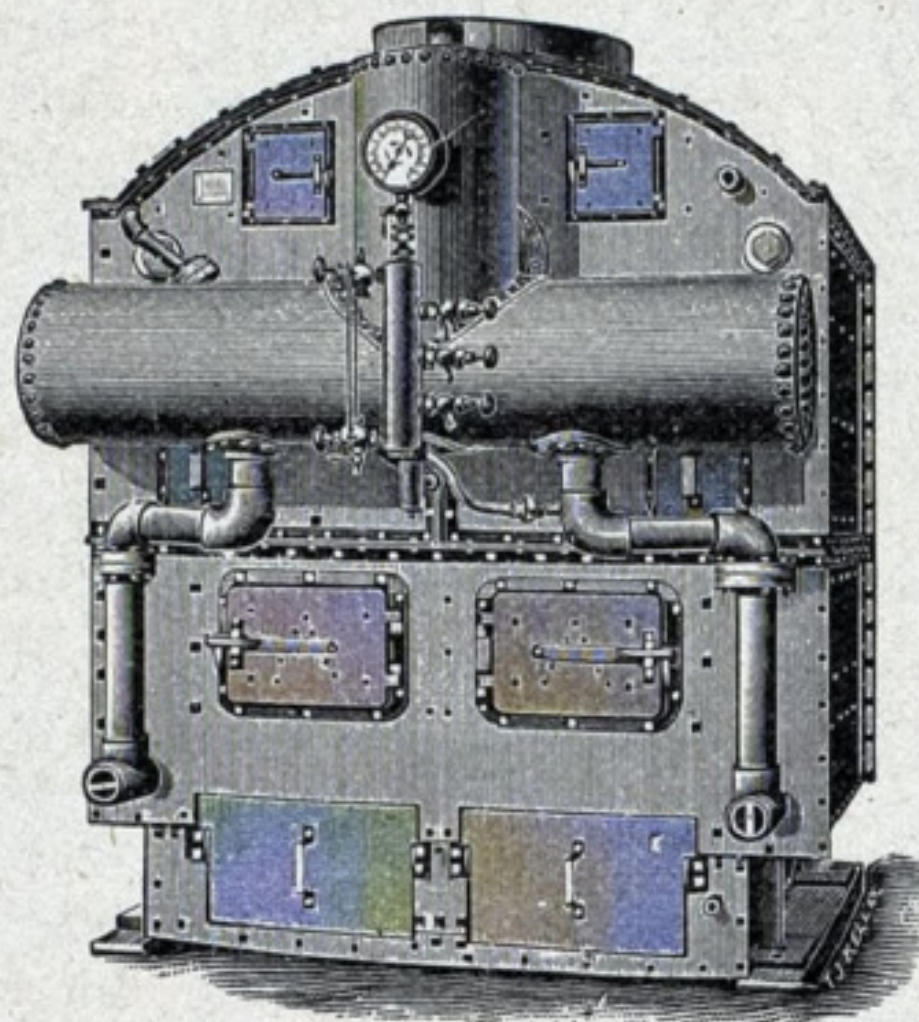
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GOULD'S NEW DIAPHRAGM SUCTION PUMP. [ILLUSTRATED.]

Almost all lake sailors know the Gould pump and its excellent style of working. Our illustration in Fig. 1 shows the pump with bottom suction for the pipe and represents the most approved design of diaphragm pump. The lever is reversible and can be used at back of the pump or on either side. The lower valve is of metal, rubber faced, easy of access and readily removable. Water-ways are large and easy. Diaphragm is made of the best quality rubber. The pump combines simplicity with strength. In these pumps the diaphragm takes the place of the plunger. They are particularly adapted for pumping water containing mud, sand, gravel, sewage, coal, chips or any semi-fluid matter. Pumps with bottom suction are used in places where they

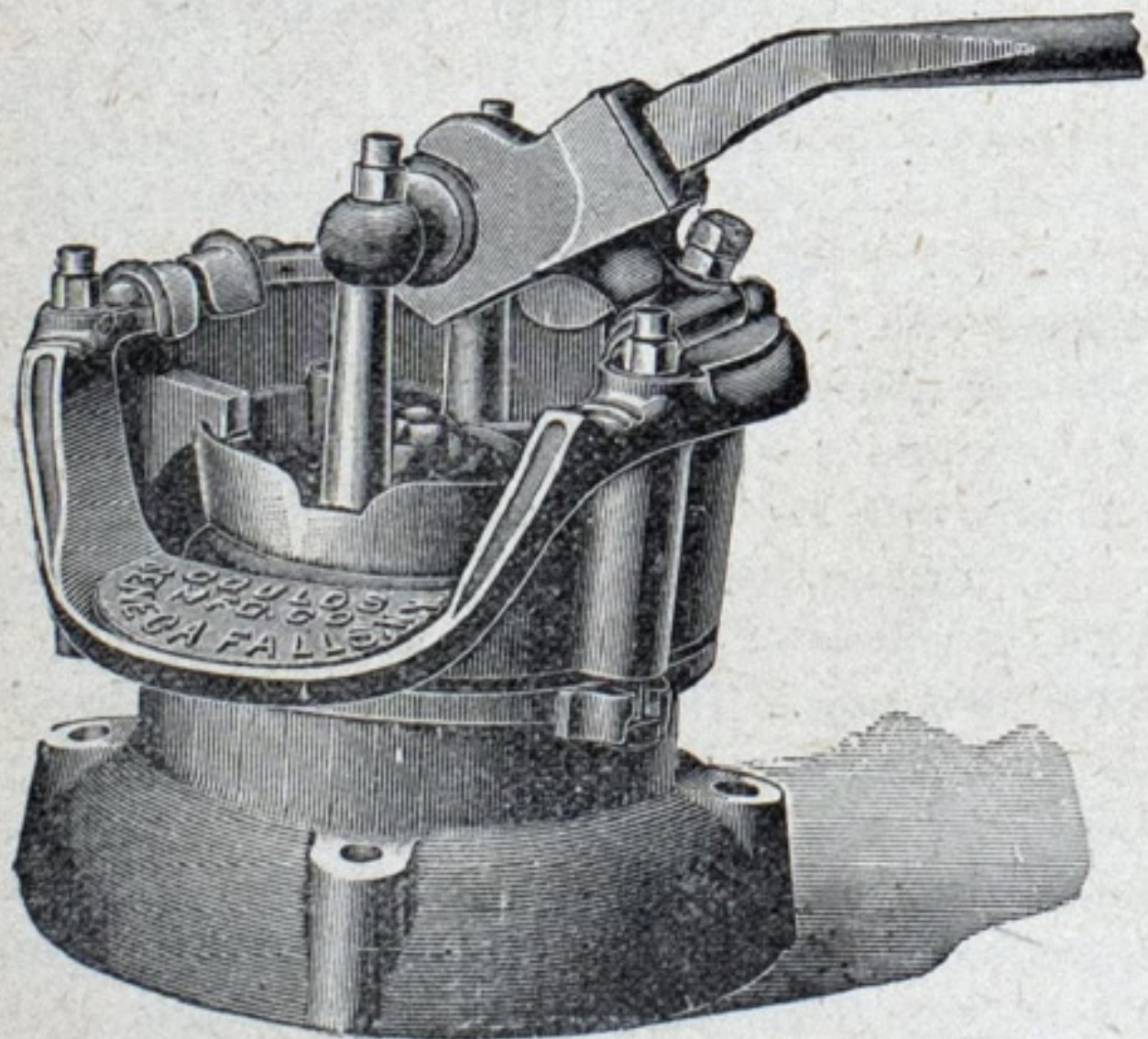


Fig. 1.

can remain stationary, as on vessels, barges, dredges, wharves, etc. Special brass hose couplings, suction hose and strainers are furnished by the manufacturers when ordered.

The second illustration and marked Fig. 2 shows a cut of the new diaphragm pump with side suction for hose or pipe and is similar in general construction to Fig. 1 described above, differing only in that it has side suction and therefore a different kind of suction valve. This valve is of brass, rubber-faced, resting upon an inclined seat, thus affording the smallest obstruction to the passage of any matter. Unless otherwise ordered, the suction is always

cut 3-inch pipe thread which is also the thread now generally used on hose-couplings of that size. Special brass hose-couplings, suction hose and strainers are furnished by

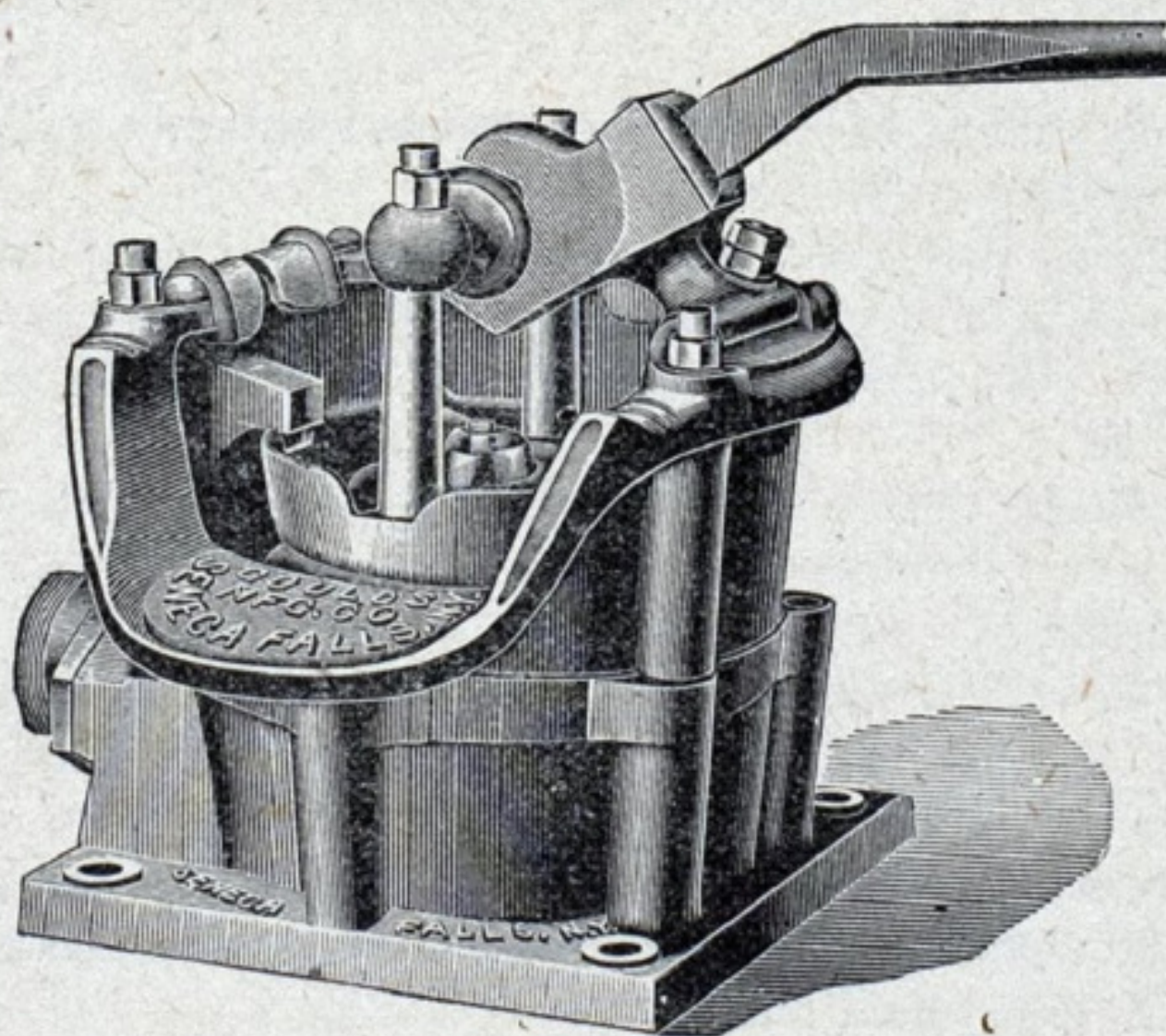


Fig. 2.

the manufacturers, The Goulds Manufacturing Co., Seneca Falls, N. Y., when ordered.

VISIBLE SUPPLY OF GRAIN

As compiled for The Marine Record, by George F. Stone, Secretary Chicago Board of Trade.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY. Bushels.
Buffalo	385,000	449,000	189,000	19,000	335,000
Chicago	4,767,000	7,293,000	590,000	148,000	680,000
Detroit	100,000	23,000	11,000	4,000	1,000
Duluth and Superior	6,848,000	2,402,000	1,357,000	108,000	135,000
Milwaukee	10,000	11,000	11,000	132,000	132,000
Montreal	173,000	91,000	523,000	5,000	12,000
Oswego	238,000	213,000	186,000	1,000	10,000
Toledo	35,000	15,000	15,000	15,000	15,000
Grand Total	25,468,000	16,978,000	7,957,000	827,000	1,537,000
Corresponding Date, 1898	23,085,000	19,504,000	8,114,000	1,448,000	486,000
Increase	2,383,000	7,474,000	-157,000	379,000	1,051,000
Decrease	560,000	2,162,000	157,000	9,000	18,000

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

ABSTRACT OF PROPOSALS FOR DREDGING.

Proposals for dredging at the following harbors on Lake Michigan were opened May 17th, by Captain J. G. Warren, Corps of Engineers, U. S. Army, at his office, Room 406, Custom House, Milwaukee, Wis.

The following is a list of bids received:

MENOMINEE RIVER, MICH. AND WIS.—Amount available, \$17,000. Estimate of amount of dredging, 172,000 cubic yards.

NAMES AND RESIDENCES OF BIDDERS.	PRICE PER CU. YARD.
Samuel O. Dixon, Milwaukee, Wis.	9 7/100c.
The Lydon & Drews Co., Chicago, Ill.	15c.
William T. Casgrain, Chicago, Ill.	17c.
The Fitzsimons & Connell Co., Chicago, Ill.	13c.
N. J. Pryer, Houghton, Mich.	9c.
C. E. Mitchell, Ludington, Mich.	14 1/2c.

OCONTO HARBOR, WIS.—Amount available, \$5,000. Estimate of amount of dredging, 20,000 cubic yards.

Samuel O. Dixon, Milwaukee, Wis.	12 1/2c.
The Lydon & Drews Co., Chicago, Ill.	14c.
The Fitzsimons & Connell Co., Chicago, Ill.	12 1/2c.
Horatio Truman, Manitowoc, Wis.	12 1/4c.

GREEN BAY HARBOR, WIS.—Amount available, \$20,000. Estimate of amount of dredging, 200,000 cubic yards.

Samuel O. Dixon, Milwaukee, Wis.	9 1/4c.
C. E. Mitchell, Ludington, Mich.	13c.
The Fitzsimons & Connell Co., Chicago, Ill.	12c.
E. J. Pryer, Houghton, Mich.	9c.
William T. Casgrain, Chicago, Ill.	17c.
The Lydon & Drews Co., Chicago, Ill.	14c.

TWO RIVERS HARBOR, WIS.—Amount available, \$4,000. Estimate of amount of dredging, 23,000 cubic yards.

Samuel O. Dixon, Milwaukee, Wis.	14 1/2c.
The Lydon & Drews Co., Chicago, Ill.	14c.
Charles Simons, Two Rivers, Wis.	13 3/4c.
The Fitzsimons & Connell Co., Chicago, Ill.	14c.

MILWAUKEE HARBOR, WIS.—Amount available, \$14,000. Estimate of amount of dredging, 100,000 cubic yards.

Adolph F. Bues, Milwaukee, Wis.	14 1/10c.
William T. Casgrain, Chicago, Ill.	15c.
The Lydon & Drews Co., Chicago, Ill.	17c.
The Fitzsimons & Connell Co., Chicago, Ill.	18c.

Damages Because of Detention.—A state board of health, being an agency of a state, is not liable for damages sustained by a ship which had been lawfully prevented by the board's order from landing its goods or passengers within a locality infected by an infectious or contagious disease. *Compagnie Francaise De Navigation a Vapeur vs. State Board of Health et al.*, 25 So. Rep. (La.) 591.

HYDRAULIC LIFT DRY DOCK.

DESIGNED, BUILT AND OWNED BY THE UNION IRON WORKS, SAN FRANCISCO, CAL.

The type of this dock is peculiar to itself, having been designed with a view to the minimum cost of construction, with an expenditure of power and time directly in proportion to the size of the vessel to be raised, with a view to the rapid cleaning and drying of a ship's bottom, when coming on the dock to be cleaned or painted, and for the convenience of men when working on the hull and especially when propellers or propeller blades are to be removed.

The platform when raised and resting on the locks, is level with the wharf, so that any heavy piece may be run onto the platform on low trucks.

The construction of the platform is simple and unique, consisting of a series of steel girders; one center longitudinal girder having a depth of 6 feet 4 inches, forming the keel, with two girders on each side of the keel, running parallel to it; the two outer girders having a depth of five feet. The five longitudinals are tied together by 36 transverse girders, having the full depth of the keel at center, and a depth of 2 feet 10 inches at the ends. The whole being securely riveted together, having heavy angle irons at the corners. Over the whole platform is built a flooring for the men to work upon.

Immediately over the center girder or keel are built the keel blocks with a length of 3 feet, on each of the transverse girders are built the bilge blocks, supported in position against the side of the ship by a pawl engaging a rack. The bilge blocks are placed in their respective positions by ropes in the usual way. The length of the platform on the keel is 436 feet 6 inches and the width is 65 feet 7 inches.

This platform is carried by 36 cast iron rams, 30.7 inches diameter, having a lift of 14 feet, 6 inches; 18 on each side of the dock.

On the upper end of the ram is carried a sheave 6 feet diameter, grooved for eight 2-inch diameter steel wire ropes. One end of the ropes is attached to the platform, then passed over the sheave and the other end is secured to the base casting of the ram, which is stationary. This arrangement gives 2 feet lift of platform to 1 foot lift of ram. There are two piers of piles to support each ram, constructed as follows:

A steel casing 50 inches internal diameter was constructed long enough to have its lower end several feet in the mud, with its upper end about water level at mean high tide. This casing was filled with piles 100 feet long, 7 to each pier, all leveled off even with top of casing, and the whole capped with a cast iron cap, each pier capable of sustaining a weight of 82 tons, giving a capacity of 164 tons to each ram.

Running longitudinally, supported on the cast iron caps are two steel girders, with a depth of 18 inches, which directly support the ram cylinders. To balance the twisting tendency of the transverse girders on the piers, cantilevers were extended out 28 feet from each side the dock and the ends anchored to two piles for each lever. Two levers being used for each ram, or a total of 72 levers.

The equalizing device for the rams is an ingenious affair and exceedingly simple in its operation; each ram being its own governor. The supply pipe for the rams extends along two sides and across one end of the dock, connecting with the accumulator in the pump house. The relief pipes extend over the same course, and discharge back into the supply tank on the pump house. At the top end of each

plunger there is placed a double hydraulic valve with a pipe connected to each one and telescoping into a pipe that extends under water alongside the piers and draws its supply from the main line.

At the valve a lever is carried with its fulcrum equidistant from the center of each valve stem "one being the inlet, the other being the outlet," while the end of the lever engages a nut carried on a vertical screw connecting with a line of shafting surrounding three sides of the dock, and operated by a pair of 6"x6" vertical engines placed in the pump house for that purpose alone. As the nut travels upward on the screw, the lever opens the inner valve and allows the water to flow into the cylinder, thereby raising the plunger until it brings the lever on a level, and shutting off its own supply, causing the plunger to follow the nut on the screw. By this means a ship is raised on one end of the platform, with perfect safety, while the other end is unoccupied, all the while the dock being kept on an even keel.

In the pump house for supplying power to raise the dock, are two 12"x16" vertical steam engines with 90 lbs. steam pressure connected by pinion and gear to four horizontal pressure pumps 3 3/4" diameter of plunger, by 36" stroke, running at an average of 31 strokes per minute, and discharging into an accumulator, whose ram is 8" diameter by 48" stroke with a total weight of 62,000 lbs. From the accumulator the water passes into the rams, under control of the valve mechanism. The accumulator has detachable weights that are added according to the weight of the ship to be balanced in raising, as the operation is simply a case of balance between the ship and accumulator.

The throttle valve of the pump engines is connected to the accumulator so that whatever leakage takes place in the pipes is constantly kept supplied automatically without any attention.

When the dock is raised a series of locks on each side are run under the platform by hydraulic rams, and the platform is allowed to settle upon them and relieve the ropes and rams from the weight.

The dock has been in constant operation since 1887, and has a record for number of ships docked that is rarely equalled, and its record of success has set the hand of approval on this bold undertaking in engineering, that had no predecessor and guide for those who were responsible for its birth, but had grit and enterprise.

Some of the principal dimensions are as follows:

Total length of girder.....	421 ft. 7 ins
Total length of platform on keel.....	436 " 6 "
Width of platform.....	65 " 7 "
Maximum lift.....	29 " 0 "
Maximum lifting capacity.....	6,000 tons.
Maximum lifting capacity per ram.....	164 "
Number of rams.....	36
Number of foundation columns.....	72
Distance between cen. rams, lengthwise.....	72 ft. 3 ins
Distance between cen. rams, crosswise.....	72 ft. 3 ins
Diameter plungers.....	30.7 ft.
Eight 2" diameter steel ropes per ram.	
Two 12"x16" vertical steam engines for pumps.	
Four pressure pumps, 36" stroke, diam. plungers 3 3/4".	
One Worthington Duplex Pressure Pump 4 1/2"x13 1/8"x4".	
One accumulator 8" diam. x 48" stroke.	
Weight on rams.....	12,000 lbs
Weight of 11 pieces of weights.....	47,500 lbs
Weight of ram.....	2,500 lbs
Total weight of accumulator.....	62,000 lbs
Average speed of pressure pumps 31 strokes per minute.	

Pressure of lifting empty dock, 275 lbs. per sq. in.
Pressure of lifting loaded dock, 1,250 lbs. per sq. in.
Speed of platform, loaded, 3.2" per minute, 1,250 per sq. in.
Steam pressure, 90 lbs. per sq. in.
Average number of vessels docked about 10 per month.

SHIPPING AND MARINE JUDICIAL DECISIONS.

(Collaborated specially for THE MARINE RECORD.)

Maritime Liens—Domestic Vessels.—A maritime lien is created by the furnishing of wharfage to a domestic vessel. The *Scow No. 15*, 92 Fed. Rep. (U. S.) 1008.

Recovery for Repairs.—Evidence of Ownership.—A firm may recover in full for repairing a steamboat, though one of the partners is a part owner of the boat. *Moynihan et al. vs. Drobaz et al.*, 56 Pac. Rep. (Cal.) 1026.

Wharfage—Custom.—A customary rate of wharfage for scows cannot control the rates fixed by Laws N. Y. 1882, c. 410, Sec. 798, since it includes all vessels engaged in carrying freight or passengers. The *Scow No. 15*, 92 Fed. Rep. (U. S.) 1008.

Wharfage—Statutory Rates—Scows.—Under Laws N. Y. 1882, c. 410, Sec. 798, classifying vessels and fixing the rates for wharfage accordingly, a scow engaged in carrying stone should be classed with the description "market boats and barges." The *Scow No. 15*, 92 Fed. Rep. (U. S.) 1008.

Authority of State Board of Health.—Acts 1898, No. 192, under which the state board of health has authority to prevent the landing by a ship of its passengers and goods within a locality infected by a infectious or contagious disease, does not deprive the owners of the ship of their liberty without due process of law. *Compagnie Francaise De Navigation A Vapeur vs. State Board of Health et al.*, 25 So. Rep. (La.) 591.

Maritime Liens—Repairs in Foreign Port.—When repairs are made on an order of a managing owner, whether or not in the home port, the presumption is against the existence of a maritime lien; and the mere fact that the repairer understands the contrary is sufficient to create a lien, unless the owner expressly or impliedly consents thereto. The *Havana*, 92 Fed. Rep. (U. S.) 1007.

Delay in Giving Signals.—The *St. Johns* was also in fault, as well as the *Catskill*, for failing to observe inspectors' rules 1 and 6, requiring signals to be given when the vessels were approaching within a half mile of each other; which fault, in view of the speed with which the vessels were approaching each other, the other circumstances of the case could not be excused nor held immaterial. In re *Central R. R. of New Jersey*, 92 Fed. Rep. (U. S.) 1010.

Sanitary Regulations.—The fact that a resolution of the state board of health, that no persons should be allowed to enter any infected locality previously placed by it in quarantine, was intended specially to prevent a certain ship from landing its passengers, does not make their action illegal, or render members of the board liable for damages resulting therefrom. *Compagnie Francaise De Navigation A Vapeur vs. State Board of Health et al.*, 25 So. Rep. (La.) 591.

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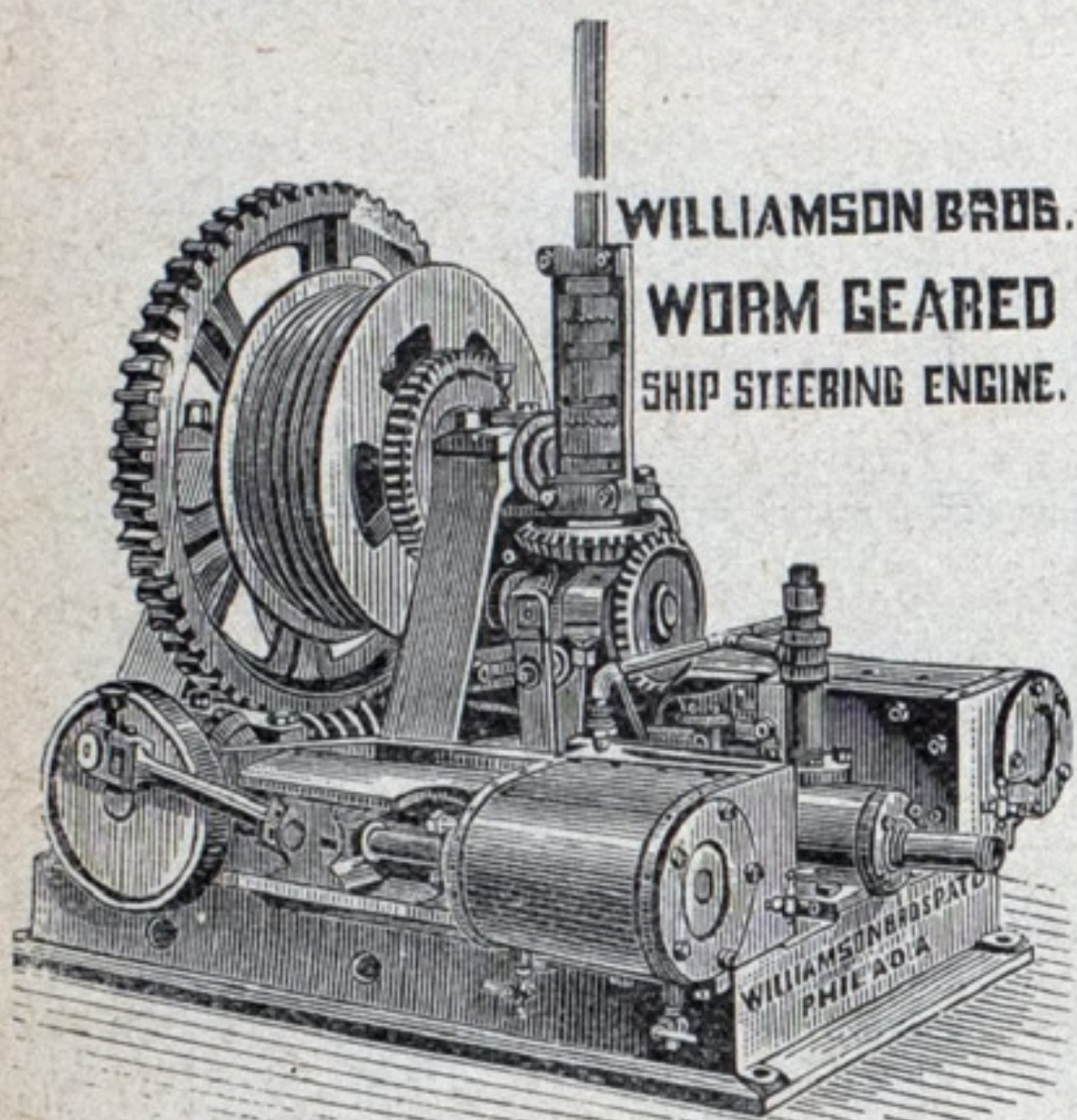
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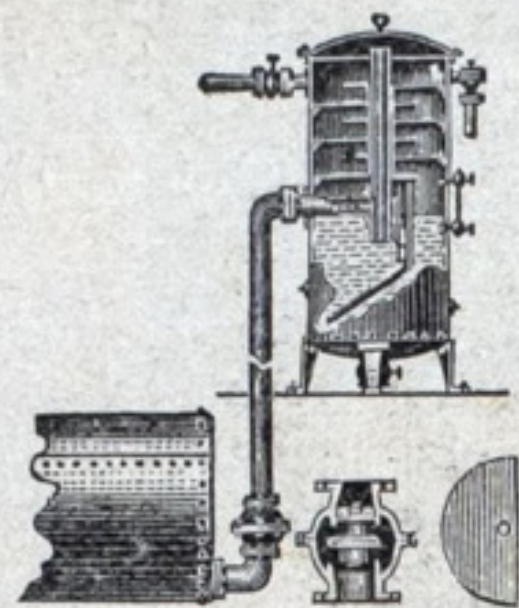
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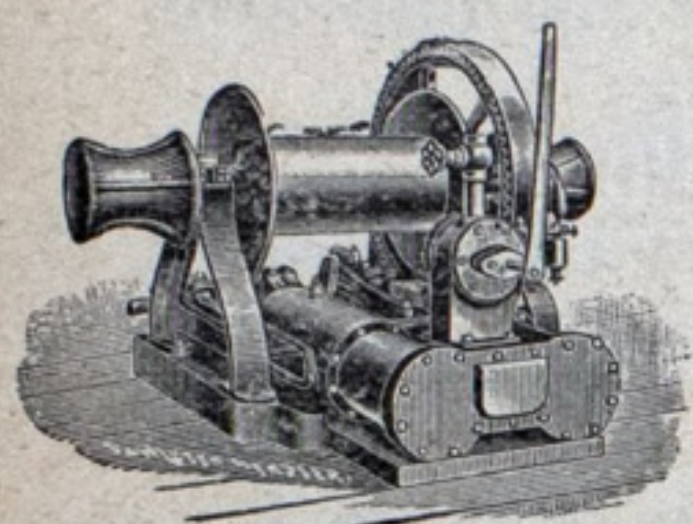
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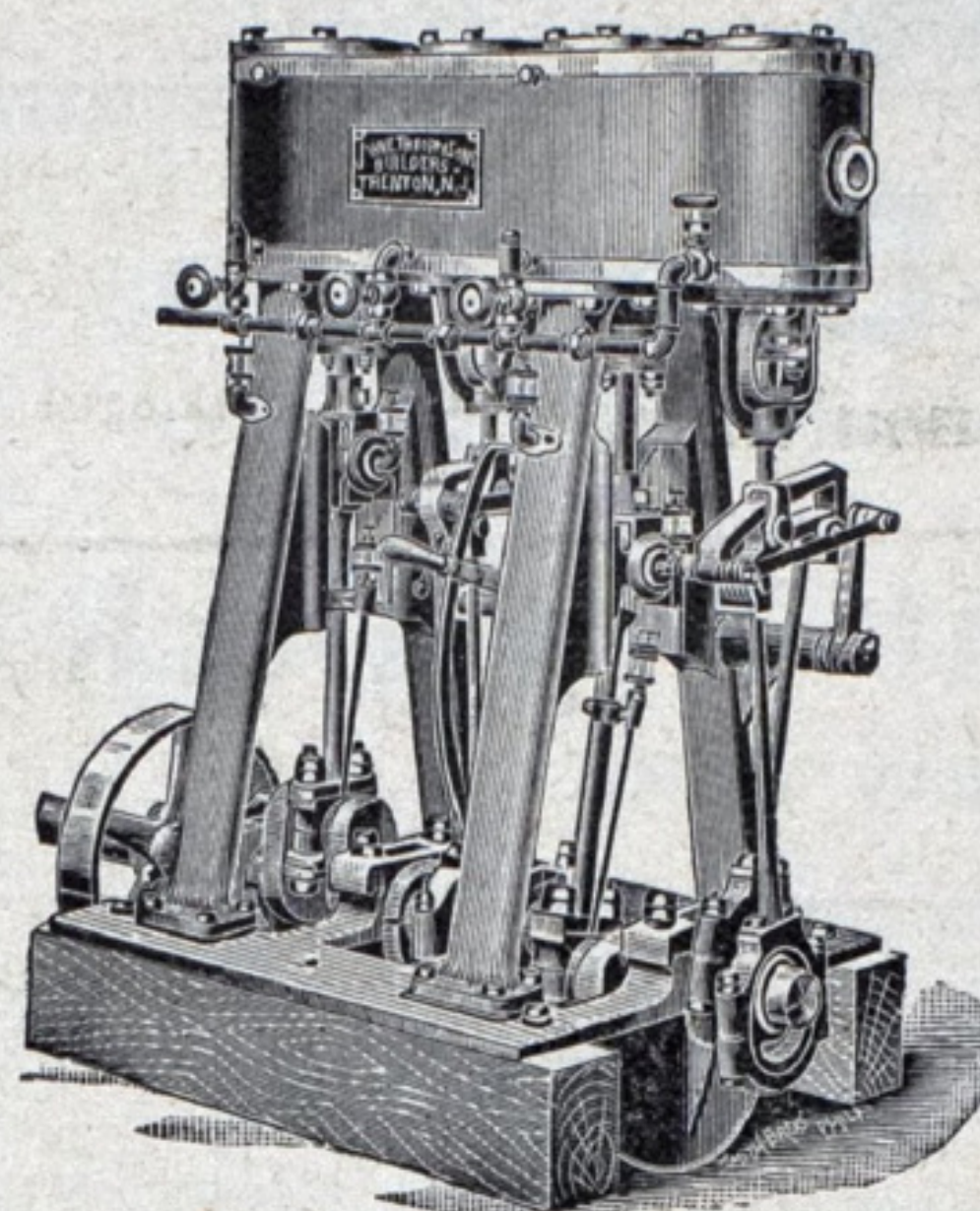
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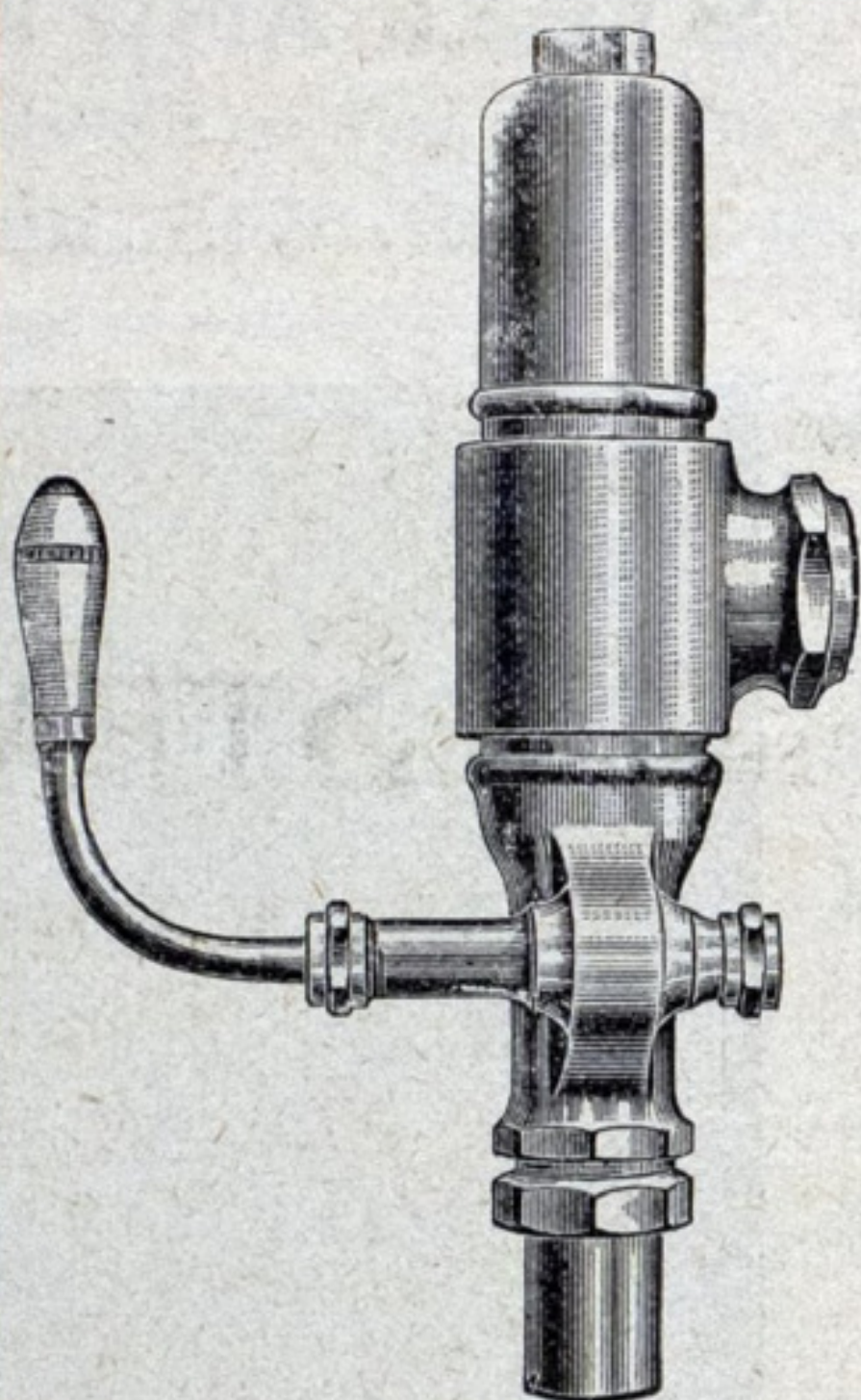
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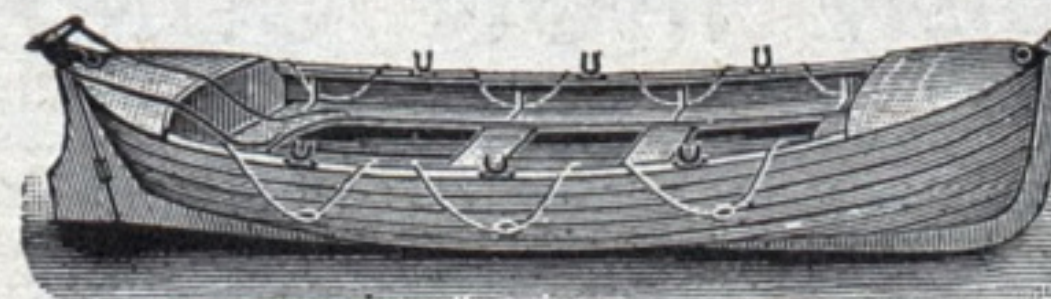
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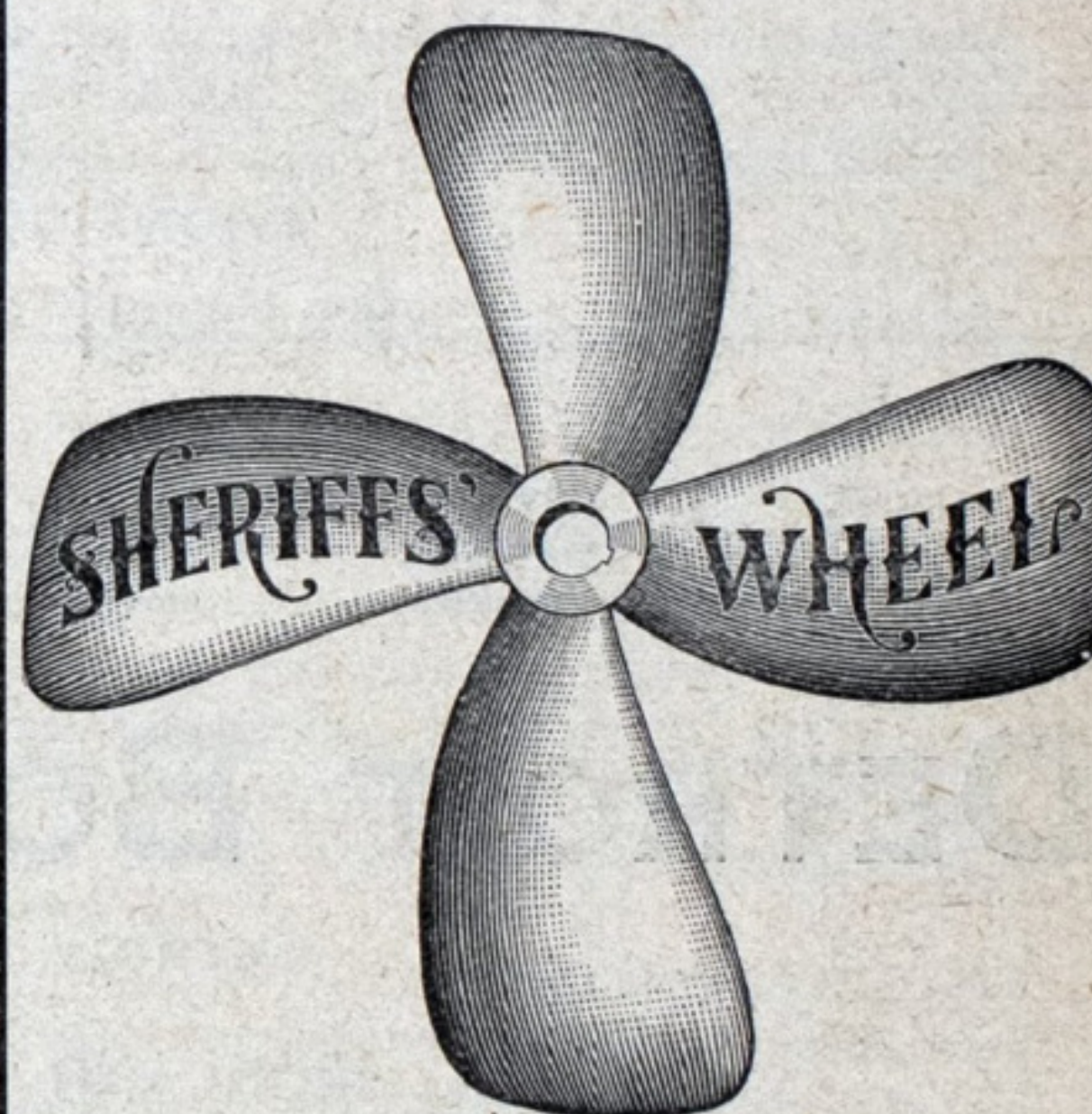
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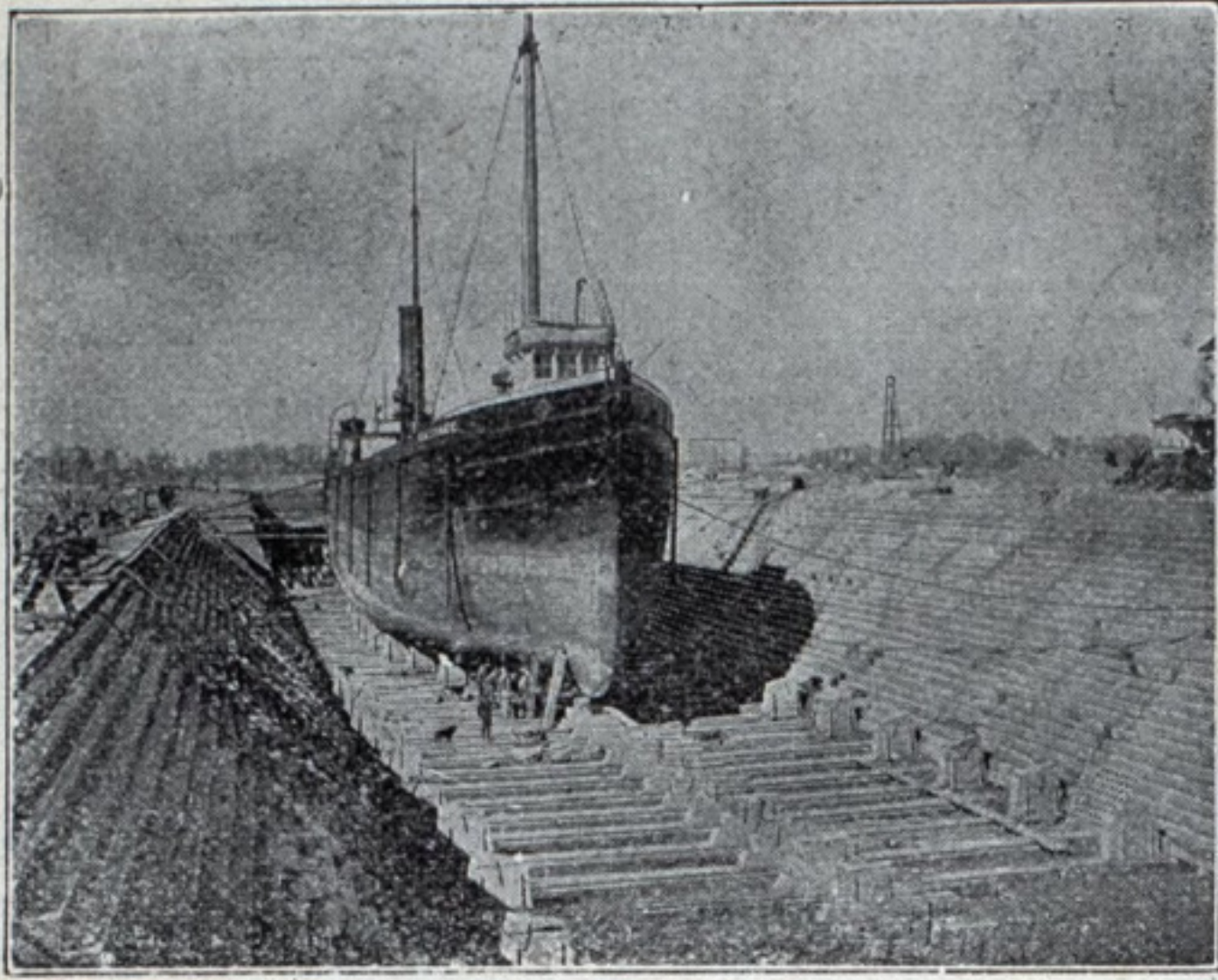
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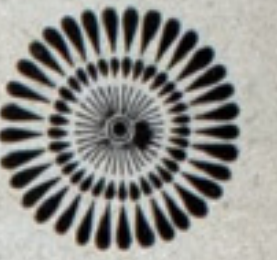
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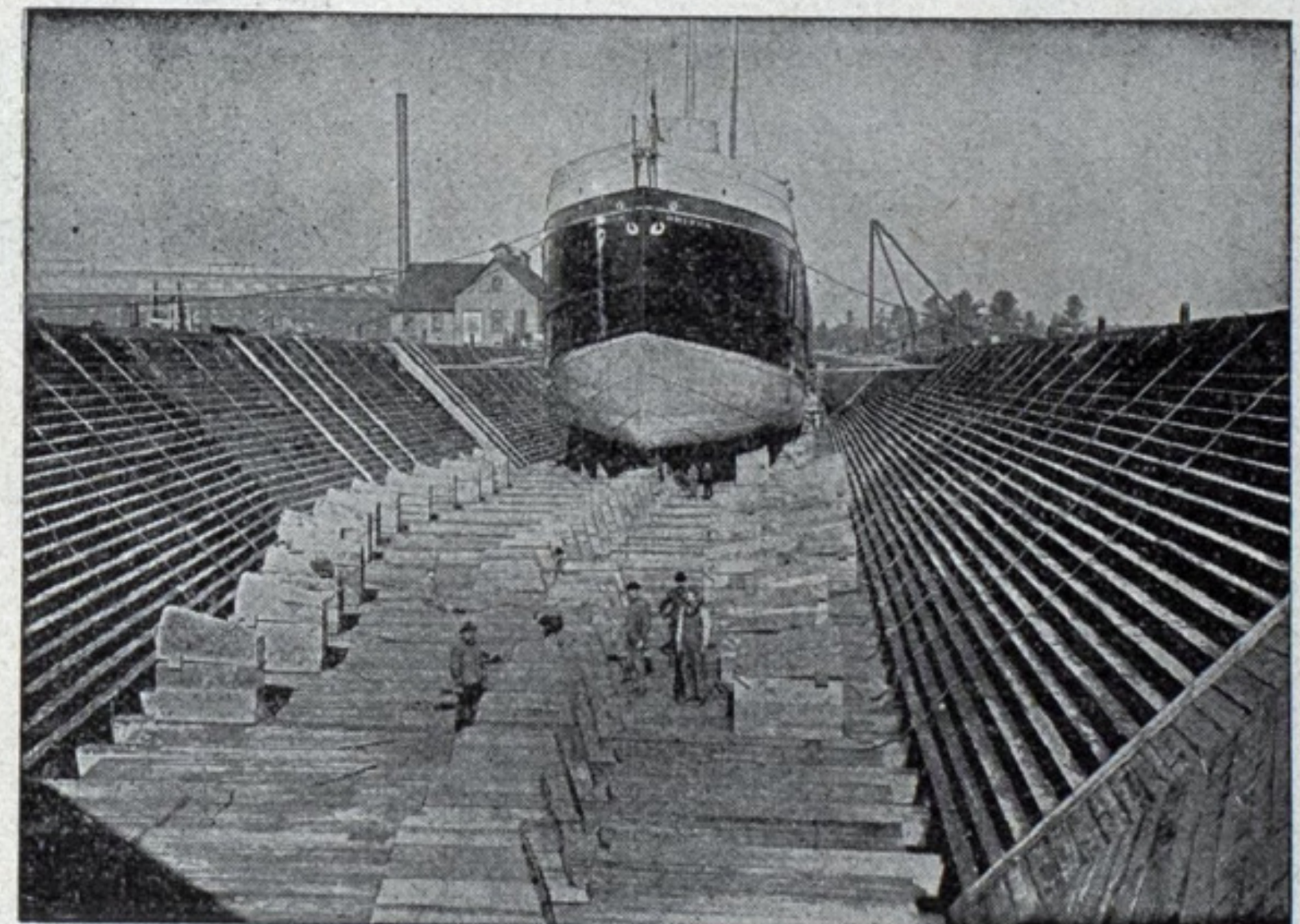
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